9.3.1 | Unit Overview

Using Seed Texts as Springboards to Research

Text(s)	Grandin, Temple, and Catherine Johnson. *Animals in Translation: Using the Mysteries of Autism to Decode Animal Behavior*
Number of Lessons in Unit	10

Introduction

In the first unit of Module 9.3, students continue to work on skills, practices, and routines introduced in Module 9.1 and Module 9.2: close reading, annotating text, and evidence-based discussion and writing, especially through text-dependent questioning, focused annotation, and an analysis of film and text. In addition, students begin the inquiry-based research process.

In this unit, students read Chapter 1 of Temple Grandin and Catherine Johnson's, *Animals in Translation*. The text serves two primary functions: first, students analyze how Temple Grandin develops and refines her central ideas as they read; and second, the text is a seed text that students use to uncover and explore potential research topics that emerge from it. Students identify and track these topics, which become springboards to the inquiry-based research process that continues in the following unit. Additionally, students are introduced to posing and refining inquiry questions about their topic for the purpose of guiding their initial research.

There is one formal assessment in this unit. At the end of the unit, students write a multi-paragraph response articulating how a central idea is developed and refined in Chapter 1 of *Animals in Translation* (RI.9-10.2, W.9-10.4). Students also express, in writing, 2–3 areas of investigation and describe how and where each area emerged from the Grandin text (W.9-10.9). These areas of investigation are the foundation for the research process that fully develops in 9.3.2.

Note: This unit suspends Accountable Independent Reading (AIR). Students are held accountable for building a volume of independent reading as they independently read *Animals in Translation* in homework assignments. Additionally, students are expected to read outside sources as they explore potential areas of investigation.

Literacy Skills & Habits

- Read closely for textual details
- Annotate texts to support comprehension and analysis
- Engage in productive evidence-based discussions about text
- Collect and organize evidence from texts to support analysis in writing
- Analyze text and multi-media
- Make claims about the development and refinement of central ideas in a text
- Use vocabulary strategies to define unknown words
- Identify potential topics for research within a text
- Use questioning to guide research
- Conduct pre-searches to validate sufficiency of information for exploring potential topics

Standards for This Unit

CCS Standards: Reading—Informational	
RI.9-10.1a	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s).
RI. 9-10.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
RI.9-10.3	Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.
RI. 9-10.4	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court

	opinion differs from that of a newspaper).
RI.9-10.5	**Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).**
RI.9-10.7	**Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.**

CCS Standards: Writing	
W.9-10.4	**Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)**
W.9-10.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
W.9-10.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
W.9-10.9	**Draw evidence from literary or informational texts to support analysis, reflection, and research.**
CCS Standards: Speaking & Listening	
SL.9-10.1	Initiate and participate effectively in a range of collaborative discussions (one-on-

	one, in groups, and teacher-led) with diverse partners on *grades 9–10 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.

CCS Standards: Language	
L.9-10.4. a,c,d	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 9–10 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

Note: Bold text indicates standards that will be assessed in the unit.

Unit Assessments

Ongoing Assessment	
Standards Assessed	RI.9-10.1a, RI.9-10.2, RI.9-10.3, RI.9-10.5, RI.9-10.7
Description of Assessment	Varies by lesson but may include short written responses to text-dependent questions focused on the development and refinement of a central idea, or the development of factual, interpretive and evaluative questions for further exploration of research topics.

End-of-Unit Assessment	
Standards Assessed	RI.9-10.2, W.9-10.4, W.9-10.9
Description of Assessment	**Part 1:** How does Grandin develop and refine a central idea in the text? In a response of 3–4 paragraphs, identify a central idea from Chapter 1 of *Animals in Translation* and trace its development and refinement in the text. Use at least four details from the text in your response. **Part 2:** Articulate in writing 2–3 areas of investigation and describe how and where each area emerged from the Grandin text. Consult the Topic Tracking Tool and Exploring a Topic Tool as well as notes from the Grandin text.

Unit-at-a-Glance Calendar

Lesson	Text	Learning Outcomes/Goals
1	*Animals in Translation* Chapter 1 pp. 1-4	In this first lesson of the unit and module, students are introduced to the module's focus: inquiry-based research to deepen understanding. Students will begin reading and analyzing Chapter 1 of *Animals in Translation*, focusing on Grandin's emerging central idea (that her autism poses both difficulties and advantages) through analysis of specific textual details.
2	*Animals in Translation* Chapter 1 pp. 4–8	Students continue to read and analyze Chapter 1 of *Animals in Translation,* focusing on Grandin further develops her claims about autism and understanding animal behavior. Students begin tracking potential research topics that surface in Grandin's text using the Topic Tracking Tool.
3	*Animals in Translation* Chapter 1 pp. 9–14	Students continue to analyze chapter 1 of *Animals in Translation*, focusing on how Grandin unfolds her analysis of behaviorism. Students continue to track potential topics for research. Students are introduced to posing inquiry questions based on research topics to guide their research.
4	*Animals in Translation*	Students continue to read and analyze Chapter 1 of *Animals in*

	Chapter 1 pp. 14–16	*Translation,* focusing on how Grandin refines and develops her central idea (that autism has made understanding animals easy). Students continue to record, discuss, and track potential research topics. Students generate inquiry questions based on topics they have identified in the text to guide their research.
5	*Animals in Translation* Chapter 1 pp. 16–20	Students continue to read and analyze Chapter 1 of *Animals in Translation* and examine the ways in which Grandin develops her central idea (autism has made understanding animals easy). Students continue to track topics in the text and generate inquiry questions. Students are also introduced to the process of refining inquiry questions to focus or narrow their research.
6	*Animals in Translation* Chapter 1 pp. 20–23	Students finish reading and analyzing Chapter 1 *Animals in Translation*, focusing on how Grandin unfolds an analysis of problems in the cattle industry. Students continue their research by considering larger topics and inquiry questions generated in previous lessons and choosing areas of investigation for further research.
7	*Animals in Translation* Chapter 1, *Temple Grandin* (film)	Students watch an excerpt from the HBO film, *Temple Grandin,* and analyze which details are emphasized in both the film and the text of *Animals in Translation*. Students begin to develop inquiry questions based on their proposed areas of investigation.
8	Texts will vary based on students' areas of investigation and pre-searches	Students engage in a pre-search activity in order to begin gathering sources for further research in future lessons. This activity is designed to develop students' ability to independently find reliable, relevant sources while navigating a wide range of potential research sources. Students refine or rewrite their inquiry questions based on their findings. Students are also introduced to the Vocabulary Journal.
9	*Animals in Translation* Chapter 1	Students engage in several evidence-based discussions to further clarify both their understanding of the Grandin text, as well as their potential areas of investigation. Students then individually develop an evidence-based claim about the development and refinement of a central idea in Chapter 1 of *Animals in Translation*.

10	*Animals in Translation* Chapter 1	For the End-of-Unit Assessment, students complete a two-part writing assignment. First, students compose a multi-paragraph response tracing the development and refinement of a central idea from chapter 1 of *Animals in Translation*. Second, students articulate in writing how and where two or three areas of investigation emerged from *Animals in Translation*.

Preparation, Materials, and Resources

Preparation

- Read and annotate Chapter 1 of *Animals in Translation*
- Review the Short Response Rubric
- Review all unit standards and post in classroom
- Review relevant excerpts from the film *Temple Grandin*
- Consider creating a word wall of the vocabulary provided in all lessons

Materials/Resources

- Chart paper
- Copies of the text *Animals in Translation* Chapter 1
- *Temple Grandin* film excerpts
- Writing utensils including pencils, pens, markers, and highlighters
- Methods for collecting student work: student notebooks, folders, etc.
- Access to technology (if possible): interactive whiteboard, document camera, and LCD projector
- Copies of handouts and tools for each student: see materials list in individual lesson plans
- Copies of the Text Analysis Rubric and Checklist
- Copies of the Short Response Checklist and Rubric

9.3.1	Lesson 1

Introduction

In this first lesson of the unit and module, students will be introduced to the module's focus: inquiry-based research to deepen understanding. Students will begin reading and analyzing Chapter 1 of Temple Grandin's *Animals in Translation*, pages 1–4 (from "People who aren't autistic always ask me about the moment*"* to *"*which is listed as an anxiety disorder in the Diagnostic and Statistical Manual*"*), in which students will be introduced to Grandin's central idea that her autism poses difficulties and advantages.

In Unit 1, students will begin learning about a specific approach to research that will be developed and completed throughout Units 2 and 3. This module will address research as an iterative, non-linear process, designed to deepen students' understanding of topics of interest. In this unit, students will read and analyze a seed text, *Animals in Translation,* to identify topics that spark inquiry and provide entry points into the research process they will engage in throughout the module. The intent of this unit, and the other units using other seed texts in this Module, is to model how to initiate a process of inquiry-based research using texts that are rich enough to provide multiple areas of investigation. In addition, compared to non-researched based modules, students will be expected to do more reading and re-reading for analysis independently during in-class work and for homework.

In this lesson, students will begin reading and analyzing Chapter 1 of *Animals in Translation*, focusing on Grandin's emerging central idea through analysis of specific textual details. For homework, students will reread and annotate pages 1–4 and preview the following lesson's text excerpt by reading and annotating pages 4–8 (from "Animals saved me." to "animal talents nobody can see based on what I know about autistic talent.") for central idea. Additionally, students will write a response to the following prompt: Using specific textual details, determine one central idea that emerges in pages 1–4.

Standards

Assessed Standard(s)	
RI.9-10.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
Addressed Standard(s)	
RI.9-10.4	Determine the meaning of words and phrases as they are used in a text, including

| | figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper). |

Assessment

Assessment(s)
The learning in this lesson will be captured through a Quick Write at the end of the lesson. Students will answer the following prompt based on the close reading (citing evidence from the text and analyzing key words and phrases) completed in the lesson.   • Using specific textual details, determine one central idea that emerges in this lesson's text excerpt (pages 1–4).   ⓘ This assessment will be evaluated using the Short Response Rubric.
High Performance Response(s)
A high performance response may include the following: • One central idea that is emerging is that autism makes school and social life difficult but makes understanding animals easier: "Autism made school and social life hard, but it made animals easy." Grandin's autism posed many difficulties for her when she was growing up. Kids teased her and called her names like "Retard," *or* "Tape Recorder" because she spoke repetitively and had difficulty with social and peer interactions. She also endured intense anxiety during her teen years that "never stopped." However, Grandin states that because of her autism she sees "things about animals other people don't." For example, she explains that she has a "special connection to animals*"* and that she is now able to comprehend the emotionally disturbed horses that resided at her former boarding school because she understands *"*the way animals think*."*

Vocabulary

Vocabulary to provide directly (will not include extended instruction)
• autism (n.) – Autism Spectrum Disorder (ASD) and autism are both general terms for a group of complex disorders of brain development. These disorders are characterized, in varying degrees, by difficulties in social interaction, verbal and nonverbal communication and repetitive behaviors.   • spectrum (n.) – a broad range of varied but related ideas or objects, that the individual features of which tend to overlap so as to form a continuous series or sequence

File: 9.3.1 Lesson 1 **Date:** 1/17/14 **Classroom Use:** Starting 1/2014

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Vocabulary to teach (may include direct word work and/or questions)
• epiphany (n.) – a moment of great or sudden revelation

Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
Standards & Text: • Standards: RI.9-10.2 and RI.9-10.4 • Text: *Animals in Translation*, Chapter 1, pages 1–4 **Learning Sequence:** 1. Introduction to Unit and Lesson Agenda 2. Homework Accountability 3. Masterful Reading 4. Pages 1–4 Reading and Discussion 5. Quick Write 6. Closing	 1. 15% 2. 5% 3. 15% 4. 50% 5. 10% 6. 5%

Materials

- Copies of **9.3 Common Core Learning Standards Tool** for each student
- Copies of **Short Response Rubric and Short Response Checklist** for each student

Learning Sequence

How to Use the Learning Sequence	
Symbol	**Type of Text & Interpretation of the Symbol**
10%	**Percentage indicates the percentage of lesson time each activity should take.**
no symbol	Plain text indicates teacher action.
	Bold text indicates questions for the teacher to ask students.
	Italicized text indicates a vocabulary word.
▶	Indicates student action(s).
💬	Indicates possible student response(s) to teacher questions.
ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Unit and Lesson Agenda   15%

Share the focus of this unit and module: Engage in an inquiry-based process for research. Inform students that in this module they will explore topics by generating inquiry questions, research different areas of a topic, build on new knowledge, make connections, and finally develop an evidence-based perspective.

Share with students the End-of-Unit Assessments and the Module Performance Assessment. Inform students that their work over the next several weeks should prepare them for these assessments. Briefly introduce the unit and the text: *Animals in Translation* by Temple Grandin and Catherine Johnson. Inform students that this unit will focus on reading and analyzing the first chapter of *Animals in Translation* to consider the development of central ideas through specific textual details. Additionally, students will begin the research process by identifying topics, creating questions, pre-searching topics, and developing areas of investigation using Grandin's text as the initial resource.

  ▸ Students listen.

Review the agenda and share the assessed standard for this lesson: RI.9-10.2. Today, students will experience a new text called *Animals in Translation* through a masterful reading of a small excerpt and will begin the process of reading pages 1–4 closely to determine an emerging central idea through specific textual details.

  ▸ Students look at the agenda.

Pass out copies of the 9.3 Common Core Learning Standards Tool to each student. Explain that students will continue to work on mastering the skills described in the Common Core State Standards (CCSS) throughout this new module and the rest of the year.

  ▸ Students listen and examine their 9.3 Common Core Learning Standards Tool.

ⓘ It may be helpful here to explain to students that they will be returning to the standards at the beginning of each lesson, as they did in Module 9.1 and 9.2. Whenever a new standard is introduced, students will use their 9.3 Common Core Learning Standards Tool to read, paraphrase, and assess their familiarity with and mastery of the new standard.

Share with students that they have reached the mid-point in their 9th grade English Language Arts instruction and it is important to self-assess their familiarity and mastery of the standards. Instruct students to self-assess on standard RI.9-10.2.

  ▸ Students self-assess their understanding and mastery of standard RI.9-10.2 using the 9.3 Common Core Learning Standards Tool.

ⓘ Remind students they have worked with standard RI.9-10.2 in Units 9.1.2 and 9.2.3.

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ⓘ It may be useful to have the standards written on the board or displayed in some other way before class begins, for ease of student reference and to encourage students to develop ownership of the standards.

Activity 2: Homework Accountability   5%

Explain to students that Accountable Independent Reading will be suspended during this module. Instead, for Unit 1 homework, students will independently preview *Animals in Translation*, while also beginning to research by independently reading possible sources for a variety of topics surfaced from the Grandin text. Explain to students that in Unit 2, the volume of independent reading will come from students' searches related to their research question/problem (area of investigation). Students will read a variety of academic sources to deepen their understanding of their specific research question/problem (area of investigation).

▸ Students listen.

Activity 3: Masterful Reading   15%

Distribute copies of Chapter 1 of *Animals in Translation* to each student and instruct students to turn to page 1. Have students listen to a masterful reading of pages 1–4 of *Animals in Translation* (from "People who aren't autistic always ask me about the moment*"* to *"*which is listed as an anxiety disorder in the Diagnostic and Statistical Manual." Instruct students to read along in their text.

▸ Students follow along, reading silently.

ⓘ The purpose of this masterful read is to familiarize students with Grandin's voice and style.

ⓘ It is important to be sensitive to the subject of developmental disorders, as some students in your classroom may know someone who has development disorders or may have developmental disorders themselves. Consider discussing with students how to be respectful when discussing this sensitive topic.

ⓘ **Differentiation Consideration:** Consider having students read pages 1–4 in pairs or small groups if a masterful read with the whole class is unnecessary due to the conversational tone and accessible vocabulary of the text.

Ask students to independently write down initial reactions and questions they have about the text. Give students 3–5 minutes to write down initial reactions and questions.

🗩 Student questions may include the following:

  o Why does autism make "animals easy"?

- o What is autism? Is it an "emotional problem"?
- o Why would a school for those with emotional problems have horses to ride?
- o What is an autistic savant?
- o What is obsessive-compulsive disorder?
- o Why does Grandin have so much anxiety?

ⓘ Assure students that any question related to the text is a valid one. If students are struggling with questions, encourage them to think about unknown vocabulary, textual details that seem confusing, or what they still want to know from the text after this initial reading.

Ask students to share out their initial questions. Write these questions on the board or on chart paper. Share with the students that it is okay to have questions as they engage in complex text and that questions like these initiate the research process. Remind them that many of these questions will be answered as the text is read closely and as they read they can keep an eye out for these answers, or what questions remain.

Activity 4: Pages 1–4 Reading and Discussion   50%

Introduce the Quick Write assessment (using specific textual details, determine one central idea that is emerging in this excerpt). Explain to students that this is the lesson assessment and the focus for today's reading.

▸ Students read the assessment and listen.

ⓘ Display the Quick Write assessment for students to see.

Instruct students to keep this assessment in mind as they analyze the text in the following evidence-based discussion. Remind students to keep track of the text analysis as they engage in the discussion by taking notes and annotating the text.

▸ Students listen.

Direct students to transition into small groups. Inform student groups that they will be rereading the first four pages of the text closely.

ⓘ **Differentiation Consideration:** Consider forming heterogeneous groupings to support students with reading this complex text.

Provide students with the definitions of autism (Autism Spectrum Disorder (ASD) and autism are both general terms for a group of complex disorders of brain development. These disorders are characterized, in varying degrees, by difficulties in social interaction, verbal and nonverbal communication and repetitive behaviors) and spectrum (a broad range of varied but related ideas or

objects, the individual features of which tend to overlap so as to form a continuous series or sequence). Explain to students that autism can have a range of characteristics. For example, some people with autism may have severe communication issues, including being nonverbal while other autistic people may have only slightly limited verbal communication issues. Autism has a range of characteristics that affect people differently, and a variety of disorders associated with it. Instruct students to write both definitions on their text.

> ▸ Students follow along and write the definitions of *autism* and spectrum on their texts.

Instruct the student groups to reread paragraphs 1 and 2 on page 1 (from "People who aren't autistic always ask me about the moment I realized I could understand the way animals think" to "Autism made school and social life hard, but it made animals easy.").

> ▸ Student groups reread paragraphs 1 and 2 on page 1.

Display the following questions for the student groups to discuss:

ⓘ Consider writing the questions on a handout for the student groups.

ⓘ Remind students to take notes or annotate the text as they engage in the evidence-based discussion. This will help support students when they complete the Quick Write at the end of the lesson.

What gives Grandin the ability to "see things about animals other people don't" (p. 1)?

> 🗨 Grandin attributes her ability to understand animals to her autism: "And it wasn't until I was in my forties that I finally realized I had one big advantage over the feedlot owners who were hiring me to manage their animals: being autistic."

What does Grandin mean when she says she did not have an "epiphany" about knowing that she can understand the way animals think? What do you think the word *epiphany* means from the context provided in this section?

> 🗨 Grandin means she did not have a "moment*"* where she "realized*"* she understands the way animals think. It was a gradual process that took her "a long time to figure out that*"* she sees "things about animals other people don't."

Instruct student groups to reread pages 1–2 (from "I had no idea I had a special connection to animals when I was little" to "I still cry when people are mean to me.")

Display the following questions for the student groups to discuss:

ⓘ Consider writing the questions on a handout for the small groups.

What does the example of a "big crisis in [her] life," reveal about Grandin's way of thinking (p. 1)?

💬 She thinks about things, like animals, differently. She was categorizing animals' identity (dogs) based on size. Then, she made sense of the dachshund being a dog by associating its nose with her golden retriever's nose. She had to categorize the dog in a certain way in order to make sense of it: "Dogs have dog noses."

How might this way of thinking make "school and social life hard" (p. 1)?

💬 Ideas that are simple for non-autistic children might be difficult for Grandin. She was using a different ideology to categorize dogs: "I used to sort them by size." This thinking might be strange or difficult to understanding if you are a non-autistic person.

How does this excerpt further develop the idea, "Autism made school and social life hard"?

💬 Student responses should include the following:

o Grandin discusses how her autism caused her to "store up a lot of phrases in my memory and I used them over and over again in every conversation." This made her sound like a "Tape Recorder" to other students, so they teased her and she reacted with aggressive behavior, like smacking.
o Eventually she "got kicked out of high school for fighting."
o She learned how to cry to deal with her aggression: "After I lost privileges enough times I learned just to cry when somebody did something bad to me."

Instruct student groups to reread pages 2–3 (from "Nothing ever happened to the kids who were teasing" to "but I wasn't any horse-whispering autistic savant, either. I just loved the horses").

Display or distribute the following questions for the student groups to discuss:

What does Grandin understand now about the horses at her former boarding school that she "didn't understand" as a fourteen-year-old?

💬 Student responses should include the following:

o The horses had serious psychological problems because they had been abused.
o They acted aggressively because of their emotional problems: "These were badly abused animals; they were very, very messed up" (p. 2).

What might Grandin's explanation of the boarding school horses reveal about her?

💬 Student responses may include the following:

- o She can understand and explain animal behavior.
- o She can explain why the horses acted the way they did because she understands the reasons for their actions: "It was flop sweat. Pure fear. She was terrified of being ridden" (p. 3).

Instruct student groups to reread pages 3–4 (from "I was so wrapped up in them that I spent every spare moment" to "and I spent hours washing and polishing it").

Display or distribute the following question for the student groups to discuss:

What does Grandin's care for the horses and the saddle reveal about her?

💬 Student responses should include the following:

- o Grandin feels good when taking care of or being around animals: "I was so wrapped up in them that I spent every spare moment working the barns" (p. 3).
- o Animals are an area where she feels content: "I bought special saddle soap and leather conditioner from the saddle shop, and I spent hours washing and polishing it" (p. 4).

Instruct student groups to reread page 4 (from "As happy as I was with the horses at school" to "which is listed as an anxiety disorder in the Diagnostic and Statistical Manual").

Display or distribute the following question for the student groups to discuss:

What made Grandin's "high school years" hard? What does this reveal about her autism?

💬 Grandin writes that she was "hit with a tidal wave of anxiety" when she was in high school that "never stopped." This further reveals the obstacles autism has posed for her, especially in school and in her social life.

ⓘ Consider discussing with students that structures and organizations, rather than people, can pose difficulties to individuals with disabilities. For example, Temple Grandin, who has difficulty with social interaction, doesn't fare well in certain settings like the traditional school she attended early on.

Activity 5: Quick Write   10%

Introduce the Quick Write assessment by reminding students of the standard they were working on during this lesson: RI.9-10.2. Instruct students to respond briefly in writing to the following prompt:

Using specific textual details, determine one central idea that is emerging in this lesson's text excerpt.

Remind students to answer the above prompt based on the reading completed in the lesson by citing strong and thorough textual evidence. Remind them to take a look at their answers to the questions from the text to support their Quick Write response.

ⓘ Display the prompt for students to see, or provide the prompt in hard copy.

Remind students to use the Short Response Checklist and Short Response Rubric to guide their written responses.

ⓘ Consider reviewing the Short Response Rubric and Short Response Checklist by informing students that they should use the rubric and checklist to guide their own writing, and that they will be using this rubric for text analysis-based Quick Writes in this unit. For later units, students will use other assessment tools and rubrics specific to the research component of this module.

▸ Students independently answer the prompt using evidence from the text.

🗩 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing   5%

Display and distribute the homework assignment. For homework, instruct students to reread and annotate pages 1–4 and preview the following lesson's text excerpt by reading and annotating for central idea pages 4–8 (from "Animals saved me" to "animal talents nobody can see based on what I know about autistic talent").

Additionally, students will write a response to the following prompt: Using specific textual details, determine one central idea that is emerging in pages 4–8.

ⓘ Consider reviewing the annotation codes introduced in Module 9.1.

o Box or circle unfamiliar words and phrases and rewrite a word or phrase you might have figured out

o Star (*) important or repeating ideas

o Put a question mark (?) next to a section you are questioning or confused about

- o   Use an exclamation point (!) for areas that remind you of another text or ideas that strike you or surprise you in some way
- o   Use initials like CI (for central idea) and SC (for structural choice)

Remind students that besides using the codes, marking the text with thinking related to the codes is important. Explain that students will continue using these codes throughout their reading of the unit's text to think more deeply about textual details.

▸   Students follow along.

Homework

Reread and annotate pages 1–4 and preview the following lesson's text excerpt by reading and annotating for central idea pages 4–8 (from "Animals saved me" to "animal talents nobody can see based on what I know about autistic talent").

Additionally, write a response to the following prompt: Using specific textual details, determine one central idea that is emerging in pages 4–8.

9.3 Common Core Learning Standards Tool

Name:		Class:		Date:	

CCL Standards: Reading—Informational Text	**I know what this is asking and I can do this.**	**This standard has familiar language, but I haven't mastered it.**	**I am not familiar with this standard.**
RI.9-10.1.a	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s).			
RI.9-10.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.			

CCL Standards: Reading—Informational Text		I know what this is asking and I can do this.	This standard has familiar language, but I haven't mastered it.	I am not familiar with this standard.
RI.9-10.3	Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.			
RI.9-10.5	Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).			
RI.9-10.7	Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.			

CCL Standards: Writing		I know what this is asking and I can do this.	This standard has familiar language, but I haven't mastered it.	I am not familiar with this standard.
W.9-10.2.a-f	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content. a. Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among			

CCL Standards: Writing		I know what this is asking and I can do this.	This standard has familiar language, but I haven't mastered it.	I am not familiar with this standard.
	complex ideas and concepts. d. Use precise language and domain-specific vocabulary to manage the complexity of the topic. e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).			
W.9-10.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.			

CCL Standards: Writing		I know what this is asking and I can do this.	This standard has familiar language, but I haven't mastered it.	I am not familiar with this standard.
W.9-10.5	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.			
W.9-10.7	Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.			
W.9-10.8	Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.			
W.9-10.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.			

CCL Standards: Speaking & Listening		I know what this is asking and I can do this.	This standard has familiar language, but I haven't mastered it.	I am not familiar with this standard.
SL.9-10.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 9–10 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.			

CCL Standards: Language		I know what this is asking and I can do this.	This standard has familiar language, but I haven't mastered it.	I am not familiar with this standard.
L.9-10.2.a-c	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses. b. Use a colon to introduce a list or quotation. c. Spell correctly.			

Short Response Rubric

Assessed Standard(s): _____

	2-Point Response	1-Point response	0-Point Response
Inferences/Claims	Includes valid inferences or claims from the text. Fully and directly responds to the prompt.	Includes inferences or claims that are loosely based on the text. Responds partially to the prompt or does not address all elements of the prompt.	Does not address any of the requirements of the prompt or is totally inaccurate.
Analysis	Includes evidence of reflection and analysis of the text.	A mostly literal recounting of events or details from the text(s).	The response is blank.
Evidence	Includes relevant and sufficient textual evidence to develop response according to the requirements of the Quick Write.	Includes some relevant facts, definitions, concrete details, or other information from the text(s) to develop an analysis of the text according to the requirements of the Quick Write.	The response includes no evidence from the text.
Conventions	Uses complete sentences where errors do not impact readability.	Includes incomplete sentences or bullets.	The response is unintelligible or indecipherable.

Short Response Checklist

Assessed Standard(s): _____

Does my writing…	Did I…	✔
Include valid inferences and/or claims from the text(s)?	Closely read the prompt and address the whole prompt in my response?	☐
	Clearly state a text-based claim I want the reader to consider?	☐
	Confirm that my claim is directly supported by what I read in the text?	☐
Develop an analysis of the text(s)?	Did I consider the author's choices, impact of word choices, the text's central ideas, etc.?	☐
Include evidence from the text(s)?	Directly quote or paraphrase evidence from the text?	☐
	Arrange my evidence in an order that makes sense and supports my claim?	☐
	Reflect on the text to ensure the evidence I used is the best evidence to support my claim?	☐
Use complete sentences, correct punctuation, and spelling?	Reread my writing to ensure it means exactly what I want it to mean?	☐
	Review my writing for correct grammar, spelling, and punctuation?	☐

9.3.1	Lesson 2

Introduction

In this lesson, students will continue to read and analyze Chapter 1 of *Animals in Translation* (pp. 4–8 from "Animals saved me" to "animal talents nobody can see based on what I know about autistic talent"), in which Grandin further develops her claims about autism and understanding animal behavior.

Students will analyze the text in an evidence-based discussion that prepares them for the lesson assessment. The assessment asks students to focus on how Grandin uses particular sentences, paragraphs, and larger portions of the text to develop and refine her claim that autism gives her a unique understanding of animal behavior. Additionally, students will begin identifying topics for interesting and rich inquiry by reflecting on pages 1–8. Students will begin completing a **Topic Tracking Tool** that will be used in subsequent lessons to track topics that surface in Grandin's text. For homework, students will complete a short research assignment to determine the definitions of terms used by Grandin to help position and explain her unique perspective on animal behavior: "behaviorism" and "ethology."

Standards

Assessed Standard(s)	
RI.9-10.5	Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).
Addressed Standard(s)	
RI.9-10.4	Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).
RI.9-10.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

Assessment

Assessment(s)
The learning in this lesson will be captured through a Quick Write at the end of the lesson. Students will answer the following prompt based on the close reading (citing evidence from the text and analyzing key words and phrases) completed in the lesson.   • Choose two sentences, paragraphs, or larger portions of this lesson's text excerpt and analyze how they develop and refine one of Grandin's claims about autism and animal behavior.   ⓘ This assessment will be evaluated using the Short Response Rubric.
High Performance Response(s)
A high performance response may include the following: • On page 7, Grandin develops and refines her claim that autism has given her an advantage in understanding animals and ultimately helped her attain professional success. Grandin states, "Animal behavior was the right field for me, because what I was missing in social understanding I could make up for in understanding animals." Grandin realizes the limitations of her autism and uses it to hone her talents in translating animal behavior. She continues to explain her success in the field characterized by her numerous accomplishments, including "over three hundred scientific papers" published and "half the cattle in the United States and Canada are handled in humane slaughter systems I've designed." She attributes this success to the fact that her "brain works differently" because of her autism.   • Grandin develops and refines another claim, how autism allows her to think "the way animals think" on page 6. Grandin describes autism as a "way station on the road from animals to humans, which puts autistic people like me in a perfect position to translate 'animal talk' into English." Grandin is able to comprehend why animals do the things they do unlike "normal" brained people and this is why her autism makes "animals easy" as opposed to normal people who cannot even recognize animal genius.

Vocabulary

Vocabulary to provide directly (will not include extended instruction)
• savants (n.) – people with unusual mental abilities that other people do not have
Vocabulary to teach (may include direct word work and/or questions)
• riveted (v.) – to cause to be fixed or held firmly, as in fascinated attention   • neuroscientific (adj.) – pertaining to the study of the anatomy, physiology, biochemistry, and pharmacology of the nervous system

Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
Standards & Text:	
• Standards: RI.9-10.5, RI.9-10.4, RI.9-10.2	
• Text: *Animals in Translation*, Chapter 1, pages 4–8	
Learning Sequence:	
1. Introduction of Lesson Agenda	1. 5%
2. Homework Accountability	2. 10%
3. Pages 4–8 Reading and Discussion	3. 40%
4. Identifying Research Topics	4. 30%
5. Quick Write	5. 10%
6. Closing	6. 5%

Materials

- Copies of **Topic Tracking Tool** for each student
- Student copies of the **Short Response Rubric and Short Response Checklist** (refer to 9.3.1 Lesson 1)

Learning Sequence

How to Use the Learning Sequence	
Symbol	**Type of Text & Interpretation of the Symbol**
10%	**Percentage indicates the percentage of lesson time each activity should take.**
no symbol	Plain text indicates teacher action.
	Bold text indicates questions for the teacher to ask students.
	Italicized text indicates a vocabulary word.
▶	Indicates student action(s).
💬	Indicates possible student response(s) to teacher questions.
ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Lesson Agenda   5%

Begin by reviewing the agenda and sharing the assessed standard for this lesson: RI.9-10.5. In this lesson, students continue to read Chapter 1 of *Animals in Translation*, pages 4–8 (from "Animals saved

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me" to "animal talents nobody can see based on what I know about autistic talent.") and analyze how Grandin further develops her claims about autism and understanding animal behavior. Students will then apply the reading analysis from pages 1–8 to begin surfacing possible research topics.

  ▸ Students look at the agenda.

ⓘ Students were introduced to RI.9-10.5 in Unit 9.2.3.

Activity 2: Homework Accountability   10%

Instruct students to take out their homework from the previous lesson.

  ▸ Students take out their homework.

ⓘ The homework from the previous lesson was the following: Reread and annotate pages 1–4 and preview the following lesson's text excerpt by reading and annotating for central idea pages 4–8 (from "Animals saved me" to "animal talents nobody can see based on what I know about autistic talent"). Additionally, write a response to the following prompt: Using specific textual details, determine one central idea that is emerging in pages 4–8.

Instruct students to examine their written response and annotation from pages 1–8 and choose four annotations that best exemplify the emerging central idea discussed in the written response.

  ▸ Students examine their written response and annotation from pages 1–8. Students then choose four annotations that best exemplify the emerging central idea discussed in the written response.

Instruct students to complete a Turn-and-Talk with a partner about their four exemplar annotation from pages 1–8, specifically discussing why the annotation best supports the emerging central idea.

  🗨 Annotation discussed may include the following:

  Pages 1–4:
  o Star next to "It took me a long time to figure out that I see things about animals other people don't*,"* (p. 1) – noting how Grandin understands animals in ways that other people do not
  o Star next to "Autism made school and social life hard, but made animals easy" (p. 1) – noting that Grandin understands animals because of her autism but it poses difficulties for her when it comes to social situations
  o Exclamation point next to "Dogs have dog noses" (p. 1) – noting that Grandin thinks about animals in ways that other people may not (she uses different ways of categorizing animals) further revealing she has a unique perspective on animals

- o Exclamation point next to "because I got kicked out of high school for fighting*"* (p. 1) – noting that Grandin struggles in school because of her autism
- o Star next to *"*It was like a loop inside my head, it just ran over and over again*"* (p. 2) – noting that her autism causes her to be repetitive, which makes her peers tease her, revealing how autism makes social interaction difficult
- o Star next to "I think it was just one of my autism genes kicking into high gear" (p .4) – noting Grandin's anxiety and how this made school even more difficult for her

Pages 4–7:

- o Star near the line "I got through my teenage years thanks to my squeeze machine and my horses. Animals kept me going" (p. 5) – noting Grandin's comment earlier that autism made animals easy. It seems to be a reciprocal relationship for her.
- o Star near the line "Autistic people can think the way animals think" (p. 6) – noting Grandin's connection to her earlier idea about autism making animals easy
- o Star near the line "Animal behavior was the right field for me, because what I was missing in social understanding I could make up for in understanding animals" (p. 7) – noting Grandin understands her limitations and strengths concerning her autism
- o Exclamation point near the line "Autism has given me another perspective on animals most professionals don't have" (p. 7) – noting Grandin feels confident about her professional abilities due to her autism

Page 8:

- o Star near the line "Animals are like autistic savants." – This is Grandin's claim about animal intelligence. She might try to prove this in the text and it further shows that because she is autistic, she might be better posed to prove an idea like this.
- o Star near the line "Normal people never have the special talents animals have, so normal people don't know what to look for" – noting Grandin's support for why autism makes understanding animals easier

- ⓘ Circulate around the room to monitor the pair discussion. Listen for students to discuss the above annotation in support of emerging central ideas from the text including: Grandin's autism gives her a unique perspective on animals and Grandin's autism makes school and social life difficult but animals easy.

Activity 3: Pages 4–8 Reading and Discussion   40%

Introduce the Quick Write assessment (choose either two sentences, paragraphs, or larger portions of this lesson's text excerpt and analyze how they develop and refine one of Grandin's claims about autism and animal behavior). Explain to students that this is the lesson assessment and the focus for today's reading.

▸ Students examine the Quick Write assessment and listen.

ⓘ Display the Quick Write assessment.

Instruct students to keep this assessment in mind as they analyze the text during the following evidence-based activity. Remind students to keep track of the text analysis by taking notes and annotating the text.

Instruct students to take out their annotated copy of *Animals in Translation*, Chapter 1 and turn to page 4. Instruct students to reread in pairs from "Animals saved me" to "Now people are cut off from animals unless they have a dog or a cat" (pp. 4–5).

▸ Students take out their annotated copies of *Animals in Translation*, Chapter 1 and reread page 4 with a partner.

Ask students the following questions:

ⓘ **Differentiation Consideration:** Consider having student pairs discuss the questions before asking them in a whole-class setting.

What does the squeeze chute passage reveal about Grandin's relationship to animals?

🗨 It shows how deeply connected she feels to animals and their experiences. The passage demonstrates how animals "saved" her by showing her that she needed a squeeze machine similar to the cows. She was able to get through her anxiety during her teenage years "thanks" to her squeeze machine, which was inspired by cows going into their own squeeze chutes.

How does Grandin demonstrate that she was "riveted" by the sight of those big animals inside the squeeze chute? What does Grandin mean by *riveted* in this excerpt?

🗨 She has her aunt "stop the car so [she] could get out and watch." She is fascinated by seeing the cows go through the squeeze chute, so riveted could mean extremely focused or fascinated by.

Why might Grandin state that, "People and animals are supposed to be together"?

🗨 Grandin has a strong connection to animals and sees how animals can be helpful to people, as she experienced in her own life: "Animals kept me going."

Instruct students to reread in pairs from "Horses are especially good for teenagers" to "But it would work a lot better if military schools still had horses" (pp. 5–6).

Ask students the following question:

ⓘ **Differentiation Consideration:** Consider having student pairs discuss the question before discussing it in a whole-class setting.

What does Grandin explain about the instinctual nature of horseback riding? How does this explanation further develop the central ideas of the text?

🗨 Grandin explains that "a good rider and his horse are a team." There is a mutual relationship between both rider and horse: "It's a relationship." Grandin is showing that she understands the relationship between a horse and rider; she can relate to animals, specifically horses, in this way: "Yet there I was, moving my body in sync with the horse's body to help him run right." This understanding continues to show how Grandin understands animals due to her autism and her own experiences/background.

Instruct students to reread in pairs from "*Animals in Translation* comes out of forty years I've spent with animals" to "They just don't know what it is, or how to describe it" (pp. 6–7) in pairs.

▸ Students reread pages 6–7 in pairs.

Ask students to do a Turn-and-Talk with a classmate discussing the various ways in which Grandin explains how she is "different from every other professional who works with animals."

Lead a whole-class share out of the pair discussion.

🗨 Student responses should include the following:

  o Grandin states that "Autistic people can think the way animals think" (p. 6). Therefore, she is saying that since she is autistic she can understand animal behavior because she can think like an animal.
  o Grandin says that "Autism is a kind of way station on the road from animals to humans" (p. 6) making her the perfect person to translate "'animal talk' into English."
  o Grandin says that her "brain works differently" (p. 7) and that is why she has been successful in the field of translating animal behavior. Autism has given her a different "perspective" on animals that other professionals do not have.

Instruct students to reread in pairs from "I stumbled across the answer, or what I think is part of the answer" to "a difference in the brain autistic people share with animals" (pp. 7–8). Define the word *savants* (people with unusual mental abilities that other people do not have) and instruct students to write the definition on their text.

▸ Students write the definition of *savants* on their text and then reread pages 7–8 in pairs.

Direct students to Grandin's discussion of "neuroscientific research" on page 7 ("Because of my own problems, I've always followed neuroscientific research on the human brain as closely as I've followed my own field.") Ask students to think about the root word *neur* and what it could refer to based on the sentence.

💬 The brain

Ask students to do a Turn-and-Talk with a classmate synthesizing Grandin's claim about autistic savants and animals and what led her to this claim.

Have the class share the outcome of the pair discussion.

💬 Student responses should include the following:

- o Animals are like autistic savants because their brains and talents are similar: "at least some animals have special forms of genius normal people don't, the same way some autistic savants have special forms of genius" (p. 8).
- o Grandin makes this claim based on her reading of "neuroscientific research" and autistic savants. She is able to make a "connection between human intelligence and animal intelligence the animal sciences have missed" (p. 7) because of her research and interest in the topics.

Instruct students to reread in pairs from "The reason we've managed to live with animals all these years" to "animal talents nobody can see based on what I know about autistic talent" (p. 8).

▸ Students reread page 8 in pairs.

Ask students the following question:

ⓘ **Differentiation Consideration:** Consider having student pairs discuss the question before discussing it in a whole-class setting.

What is Grandin exploring or researching? How does this exploration or research further develop a central idea in the text?

💬 Student responses should include:

- o Grandin is looking for specific animal talents where animals show how they can "perceive" (understand, identify, or become aware of things) that humans cannot and to remember "detailed information" that humans cannot remember.

- o Grandin is saying that her autistic mind gives her a unique perspective on animal behavior and she has an advantage in identifying animal talents that "normal people" cannot.
- o She is able to "predict animal talents nobody can see based on what I know about autistic talent" (p. 8).

Activity 4: Identifying Research Topics   30%

Share with students that they have been reading closely and analyzing texts (in the previous two modules) for several purposes, including evidence-based discussion and writing. Share with students that this type of reading is also about deepening understanding. This understanding can be about a variety of things like authorial choices when analyzing literature, or it can be about learning and thinking in depth about a topic you want to know more about. For the purposes of this module, the text analysis is about analyzing the text itself, based on the standards, but also about surfacing topics that are potentially interesting and rich to research. These initial topics will begin the inquiry process. As the process unfolds, aspects of the topics will develop as questions are posed and refined and pre-research is conducted.

▶ Students listen.

Distribute the Topic Tracking Tool to each student.

▶ Students examine the Topic Tracking Tool.

ⓘ See the end of the lesson for an example Topic Tracking Tool.

Inform students that they will be reviewing pages 1–8 by thinking about the following question: What topics does Grandin surface or address in this part of the text? Instruct students to review pages 1–8 and write down key topics that surface in the text in column 1 on the Topic Tracking Tool. Instruct students to only complete column 1 for now.

▶ Students review pages 1–8 and complete column 1 of the Topic Tracking Tool by writing down key topics surfacing in this part of the text.

Lead a whole-class discussion about the topics Grandin surfaces.

🗨 Student responses may include the following:

- o Autism
- o The link between autism and understanding animal behavior
- o Animal behavior
- o Animals helping emotionally disturbed people
- o Developmental disorders

- o   Animal intelligence
- o   Autistic savants
- o   Neuroscience

ⓘ Consider displaying notes on the discussion so students can see the various topics.

Model for students how to complete columns 2 and 3 of the Topic Tracking Tool by identifying one topic, page number(s) where the topic is discussed, and key information about the topic from the text.

▸   Students listen and follow along with the modeling.

ⓘ See the Model Topic Tracking Tool at the end of the lesson for possible modeling content.

Instruct students to individually complete at least three more rows of the Topic Tracking Tool for the topics surfaced during the previous text review. Remind students that new topics will emerge in each portion of *Animals in Translation* and they should record all possible topics for research.

▸   Students individually complete at least three more rows of the Topic Tracking Tool for the topics surfaced during the previous text review.

ⓘ Circulate around the room to ensure students understand how to complete the Topic Tracking Tool.

ⓘ See model student responses at the end of the lesson.

Activity 5: Quick Write   10%

Instruct students to respond briefly in writing to the following prompt:

Choose either two sentences, paragraphs, or larger portions of this lesson's text excerpt and analyze how they develop and refine one of Grandin's claim about autism and animal behavior.

Remind students to use the Short Response Checklist and Short Response Rubric to guide their written responses.

ⓘ Display the prompt for students to see, or provide the prompt in hard copy.

▸   Students independently answer the prompt using evidence from the text.

🗨 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing   5%

Display and distribute the homework assignment. For homework, instruct students to complete a short research assignment to determine the definitions of the following terms: *behaviorism* and *ethology*.

Students will conduct a web search, finding resources that define and explain both terms. These resources should include common online reference materials and other online resources such as audio and video. Students will need to unpack the definitions and/or explanations of both sciences by answering the following prompt: Explain, in your own words, the terms *behaviorism* and *ethology*. How do the resources you found help you understand these terms?

Homework

Conduct a web search of the following terms, which will be referenced in the next excerpt we will be reading from Grandin's chapter 1.

- Behaviorism
- Ethology

Explain, in your own words, the terms *behaviorism* and *ethology*. How do the resources you found help you understand these terms?

Topic Tracking Tool

Name:		Class:		Date:	

Topic	Page Number(s)	Key Information About the Topic from the Text

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Model Topic Tracking Tool

Name:		Class:		Date:	

Topic	Page Number(s)	Key Information About the Topic from the Text
The link between autism and understanding animal behavior	6–8	Grandin believes she has a unique perspective on animals because of her autism. She says, "Normal people never have the special talents animals have, so normal people don't know what to look for."
Animals can help emotionally disturbed people.	2–3, 5	Grandin understood the emotionally disturbed animals at her boarding school because of her own emotional issues. Kids who have emotional problems will do better if they are horseback riding: "the rider will end up doing better than the nonrider."
Developmental Disorders (Autism, Obsessive-Compulsive Disorder)	1, 4	Grandin has autism. She says it poses difficulties: "Autism made school and social life hard" but also advantages: "but it made animals easy."
Autistic Savants	7	Grandin thinks autistic savants share similar brains to animals that "animals are like autistic savants."
Animal Intelligence	8	Gradin claims, "Animal genius is invisible to the naked eye." She writes about using animal talents and intelligence for the betterment of humans and animals.

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9.3.1	Lesson 3

Introduction

In this lesson, students will read and analyze pages 9–14 from *Animals in Translation* (from "By the time I got to college" to "capable of a lot more than anybody thought, and that was a good thing"). In this portion of the text, Grandin unfolds her analysis of the behaviorist field of psychology.

This lesson is students' first introduction to the different fields of psychology that are foundational for understanding Grandin's unique point of view as an animal specialist. The lesson assessment asks students to analyze how Grandin unfolds her analysis of behaviorism. Students will also continue to track potential topics for research and practice how to generate inquiry questions from research topics, a fundamental starting point in the research process in this module. For homework, students will begin informally researching in order to explore, begin to build background knowledge, and generate interest around potential topics. The inquiry questions generated in class will guide students as they begin to explore research topics.

Standards

Assessed Standard(s)	
RI.9-10.3	Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.
Addressed Standard(s)	
RI.9-10.1.a	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s).
RI.9-10.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
L.9-10.4.c	Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology.

Assessment

Assessment(s)
The learning in this lesson will be captured through a Quick Write at the end of the lesson. Students will answer the following prompt based on the close reading (citing text evidence and analyzing key words and phrases) completed in the lesson. • How does Grandin introduce and develop her analysis of behaviorism? What connections does she make between her perspective and her analysis of behaviorism? ⓘ This assessment will be evaluated using the Short Response Rubric.
High Performance Response(s)
A high performance response may include the following: • Grandin introduces behaviorism as a popular field of psychology when she started university, "the whole field of psychology was B.F. Skinner and behaviorism" (p. 9). Behaviorists believed that since you can "measure only behavior" environment is the "only thing that mattered" (p. 9). Behaviorists also study the effect of positive and negative reinforcements to shape or modify behaviors, "punishing a bad behavior isn't as effective as rewarding a good behavior" (p. 9). Grandin understands that there are benefits to behaviorism and the study of environment but she also believes, "Behaviorists made a big mistake declaring the brain off-limits" (p. 11). Grandin came to this conclusion through her own experiences and perspective: "I didn't believe it because I had problems that sure didn't seem to be coming from my environment" (p. 11).

Vocabulary

Vocabulary to provide directly (will not include extended instruction)
• behaviorism (n.) – the theory or doctrine that human or animal psychology can be accurately studied only through the examination and analysis of objectively observable and quantifiable behavioral events, in contrast with subjective mental states • ethology (n.) – the study of animal behavior with emphasis on the behavioral patterns that occur in natural environments • operant conditioning (n.) – the process of behavior modification that changes a subject's behavior based on positive and negative reinforcements • media specialist (n.) – In schools, the term covers a broad spectrum of educational roles. It can mean the person who operates audio-visual equipment, the librarian, a teacher with broad knowledge of media resources and the communication process, or one who helps other teachers or students locate an array of resources.

Vocabulary to teach (may include direct word work and/or questions)
• stimulus (n.) – something that causes or quickens action

Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
Standards & Text:	
• Standards: RI.9-10.3, RI.9-10.1.a, RI.9-10.2, L.9-10.4.c	
• Text: *Animals in Translation*, Chapter 1, pages 9–14	
Learning Sequence:	
1. Introduction Lesson Agenda	1. 5%
2. Homework Accountability	2. 15%
3. Pages 9–14 Reading and Discussion	3. 40%
4. Posing Inquiry Questions	4. 25%
5. Quick Write	5. 10%
6. Closing	6. 5%

Materials

- Student copies of the **Topic Tracking Tool** (refer to 9.3.1 Lesson 2)
- Copies of the **Posing Inquiry Questions Handout** for each student
- Student copies of the **Short Response Rubric and Short Response Checklist** (refer to 9.3.1 Lesson 1)

Learning Sequence

How to Use the Learning Sequence	
Symbol	**Type of Text & Interpretation of the Symbol**
10%	**Percentage indicates the percentage of lesson time each activity should take.**
no symbol	Plain text indicates teacher action.
	Bold text indicates questions for the teacher to ask students.
	Italicized text indicates a vocabulary word.
▶	Indicates student action(s).
💬	Indicates possible student response(s) to teacher questions.
ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Lesson Agenda   5%

Begin by reviewing the agenda and the assessed standard for this lesson: RI.9-10.3. Inform students that they will be examining how Grandin unfolds her analysis of behaviorism in this chapter as well as tracking topics and learning how to generate inquiry questions.

▸ Students look at the lesson agenda.

Activity 2: Homework Accountability   15%

Instruct students to Turn-and-Talk with a classmate about the definitions of *behaviorism* and *ethology* they found for homework.

ⓘ **Differentiation Consideration:** Consider reminding students these are difficult concepts and knowing the definition of these terms will help them understand the text. This is why, in addition to common online reference materials, students were encouraged to use audio and video to help gain an understanding of these terms. Explain to students that it is also helpful to put these definitions in their own words to make sure they fully comprehend the definition.

ⓘ **Differentiation Consideration:** Consider leading a brief whole-class discussion in order to clarify the meaning of *behaviorism* and *ethology* before students talk in pairs.

▸ Students Turn-and-Talk with a classmate, discussing the definitions they found for homework.

🗨 Student responses should include:

　　o *Behaviorism* is the theory that human or animal psychology can be accurately studied and measured in a laboratory.
　　o *Ethology* is the study of animal behavior in the animal's natural environment.

Ask students:

How did the resources you found help you understand these terms?

ⓘ Remind students that additional resources such as video clips that reinforce understanding of an idea or concept will be part of their Module Performance Assessment.

ⓘ It is important that students have an understanding of *behaviorism* as well as *ethology* as they continue to read *Animals in Translation* and it may be necessary to check in with student pairs or the entire class to confirm their understanding.

▸ Student pairs discuss the resources they found and how it helped them understand *behaviorism* and *ethology*.

🗨 Student responses will vary depending on the resource:

- This entry on dictionary.reference.com helped me understand ethology because it mentions that ethology emphasizes behavior that happens in natural environments.
http://dictionary.reference.com/browse/ethology?s=t
- This video, "Behaviorism 101, by user Nessy Mond," helped me understand behaviorism because it presented information in a clear way and used visuals effectively.
- The video "Animal Behavior" by Bozeman Science helped me understand that ethology studies a wide variety of animal behaviors in their natural environments. This video used a lot of pictures and helpful examples.

ⓘ "Behaviorism 101" found on YouTube (http://www.youtube.com/watch?v=RU0zEGWp56Y&feature=youtu.be): © Copyright Vanessa Monaghan/Claire Whitehead/Catherine Lonegan/Ciara McDonnell. "Animal Behavior" found on YouTube (http://youtu.be/6hREwakXmAo) Creative Commons Attribution License.

Activity 3: Pages 9–14 Reading and Discussion   40%

Introduce and display the Quick Write assessment (How does Grandin introduce and develop her analysis of behaviorism? What connections does she make between her perspective and her analysis of behaviorism?)

‣ Students read the Quick Write assessment.

Instruct students to take out their Topic Tracking Tool introduced in the previous lesson. Inform students that they will continue to record potential topics for research as they read and discuss this portion of *Animals in Translation*. Explain to students that they will discuss potential topics for research with a partner as they emerge from the text. Remind students to record the topics as well as the key details from *Animals In Translation* about the topic on their Topic Tracking Tool.

Instruct students to form pairs and read pages 9–10 (from "By the time I got to college I knew" to "I wanted to talk to him about some of the research I had done"). Instruct students to discuss the following questions and record their answers.

ⓘ Potential topics can be found on the modeled Topic Tracking Tool at the end of this lesson. The topics revealed during Lessons 1 and 2's in-class work and assessments should provide a solid foundation for this work.

‣ Student pairs take out their Topic Tracking Tool, read, discuss, track topics, and record their answers to the questions.

According to Grandin what is the central feature behaviorists observe when studying an animal or human psychology?

💬 Grandin writes that behaviorists believe that the "environment was the only thing that mattered" (p. 9).

ⓘ **Differentiation Consideration:** Remind students that this is the reason they searched, defined, and found a resource to understand the concept of behaviorism and that sometimes authors don't always explain complicated concepts in a text.

What is the "black box" and why was it off-limits to behaviorists?

💬 It was stuff, intelligence, emotions, and motives that you could not measure. Behaviorists only look at environment because you cannot see what is happening inside a person or an animal's head.

What is the difference between punishment and negative reinforcement?

💬 Punishment is something bad happening to you and negative reinforcement is "something you don't like either stops or doesn't start in the first place."

ⓘ **Differentiation Consideration:** Consider these questions to scaffold student understanding of positive and negative reinforcements:

What is the effect of positive and negative reinforcements?

💬 Positive and negative reinforcements shape animal behavior. "Animals only had behavior, which was shaped by…positive and negative reinforcements from their environment."

What kind of reinforcements are the most effective?

💬 Grandin writes that "rewarding good behavior" is more effective than punishment.

Based on Grandin's explanations of different types of positive and negative reinforcements, explain in your own words what she means by "stimulus-response machines."

💬 Behaviorists thought that animals were "stimulus-response machines" (p. 10), meaning that they would all react the same way to positive and negative reinforcements in an automatic way.

What details has Grandin introduced about behaviorism in this portion of text? Give three pieces of evidence to support your answer.

💬 Grandin has introduced several details about behaviorism. First, behaviorists believe that "environment was the only thing that mattered," (p. 9) when studying animals who they think do not "have emotions or intelligence," (p. 9). Grandin writes that behaviorists think that since animals are totally behavior driven their behavior can be "shaped by rewards, punishments."

ⓘ **Differentiation Consideration:** Consider modeling *behaviorism* as a potential research topic to students who may need more support with the Topic Tracking Tool.

Ask students to read pages 10–12 (from "His office called and invited me down" to "It works better because it respects the animal's behavior"). Instruct students to discuss the following questions and record their answers. Remind students to continue to record potential research topics on their Topic Tracking Tool.

Provide the definition of *operant conditioning* as: the process of behavior modification that changes a subject's behavior based on "positive and negative reinforcements from their environment," (p. 9).

▸ Student pairs read, discuss, track topics, and record their answers to the questions.

Why did Dr. Skinner believe that *operant conditioning* made the study of the brain unnecessary?

🗨 Skinner believed that studying the effect of positive and negative reinforcements on behavior was such a powerful way to understand animal and human thinking that studying the brain did not seem necessary. "Animals only had behavior, which was shaped by rewards, punishments, and positive and negative reinforcements from the environment" (p. 9).

What made Grandin believe that Dr. Skinner's claim that *operant conditioning* was wrong? Give evidence to support your answer.

🗨 From her own experience Grandin saw that she "had problems that sure didn't seem to be coming from my environment." In addition, in her ethology class she studied how instincts are "hardwired" into the animal without any influence from the environment.

What is the connection between behaviorists and ethologists? What does Grandin think about their approach to studying animals?

🗨 Behaviorists and ethologists both study animals in their environments. Behaviorists study animals in laboratories while ethologists study them in their natural environments. Grandin, however, thinks that "looking at animals [only] from the outside" and "declaring the brain off-limits" (p. 11) is a big mistake.

How does Grandin support her claim that "the equipment won't work if the environment is bad"? How does this claim relate to behaviorism?

🗨 Grandin supports this claim through her experience with designing equipment in the meatpacking industry, comparing the inefficient old V-restrainers with her new design: "animals don't like to walk into a space where they feel like there isn't enough space for their feet"

(p. 12). She also says "a lot of plant owners don't think twice about their cattle's environment" (p. 12). Her innovation in the industry is a result of examining the cattle's environment as well as viewing the environment from their perspective.

Why does Grandin claim she is not an "enemy of behaviorism"?

🗩 Grandin makes this claim because she uses behaviorism a lot in her work with animals, "My design innovation wasn't technological, it was behavioral." She uses behaviorism to support her understanding of animals but doesn't believe "the laws of learning were simple and universal, and all creatures followed them" (p. 12).

How does Grandin develop her analysis of behaviorism in this portion of text?

🗩 Grandin writes that she did not agree with Dr. Skinner's statement that *operant conditioning* was the only thing that needed to be studied to understand the psychology of an animal. Grandin disproves Dr. Skinner's claim using her knowledge of ethology as well as her own experience, "I had problems that sure didn't seem to be coming from my environment" (p. 11). Grandin also introduces positive aspects of behaviorism, making her analysis more complex. She writes that behaviorist's focus on the study of the environment "was a huge step forward" (p. 11) toward understanding animal behavior.

Ask students to read pages 12–14 (from "But the plants don't realize that" to "capable of a lot more than anybody thought, and that was a good thing"). Instruct students to discuss the following questions and record their answers. Remind students to continue to record potential research topics on their Topic Tracking Tool.

What was the significance of Dr. Lovaas's study? How does the inclusion of this study further develop Grandin's analysis of behaviorism?

🗩 Dr. Lovaas's study was important because it gave "a reason to think that autistic people were capable of a lot more than anybody thought" (pp. 13–14). This study develops Grandin's positive analysis of behaviorism, its benefits, and successes even if she does not fully agree with all behaviorist ideas.

Activity 4: Posing Inquiry Questions   25%

Instruct students to keep out their Topic Tracking Tool. Inform students that they will continue to record topics, the same way they were introduced to in the previous lesson, and that today they will begin to use these topics to generate inquiry questions to deepen their understanding. Explain to students that during this research process they will be using inquiry questions to guide their research and analysis.

This process is recurring and they will continue to surface new questions as they acquire information about their research topics.

▸ Students listen.

Inform students that *Animals in Translation* will be used to generate sample topics for research in this module. Explain that Temple Grandin touches on many topics throughout the first chapter of *Animals in Translation*. Of these, they will use autism as a sample topic to generate inquiry questions as a class. Distribute the Posing Inquiry Questions Handout to students. Inform students that they will be focusing on generating inquiry questions that they will select and refine in later lessons. At this stage, the inquiry questions are meant to guide an initial exploration of a topic. Instruct students to read the Generating Questions portion of the handout.

▸ Students read the Generating Questions portion of the handout.

Explain to students that by using the questions on the handout concerning each individual topic, it is possible to come up with a wide variety of inquiry questions. Remind students to consider what they find interesting and what they would like to know more about when they are generating questions. Explain to students at this stage it is best to brainstorm as many questions as possible.

▸ Students listen.

Display the autism topic for students and the example inquiry question: How does autism affect the human brain? Explain to students that based on the "What are its causes and implications?" prompt from the handout this is an open-ended inquiry question. Ask students to volunteer potential inquiry questions.

🗩 Student responses may include:

   o How is autism defined?
   o What is the history of autism?
   o Where did autism originate?
   o What are the major aspects of autism?
   o What are the characteristics of autism?
   o Why might people with autism be able to understand animals better than people without autism?
   o What else is autism connected and associated with?
   o Who are famous or important autistic people?
   o Who is an expert on autism?
   o Are there countries that have more people with autism than others?

Instruct students to form pairs, choose a topic from the Topic Tracking Tool and generate five inquiry questions.

> 💬 Student responses will vary depending on the potential research topic. Student responses may include:
>
> Topic: Behaviorism
> Inquiry Questions:
> o   What is the history of behaviorism?
> o   Who are experts in behaviorism?
> o   What are major aspects of behaviorism?
> o   What are important discoveries behaviorists have found when observing animals?
> o   What else is behaviorism associated with besides animal psychology?

Activity 5: Quick Write   10%

Instruct students to respond to the following Quick Write prompt:

How does Grandin introduce and develop her analysis of behaviorism? What connections does she make between her perspective and her analysis of behaviorism?

ⓘ Display the prompt for students to see, or provide the prompt in hard copy.

Remind students to use the Short Response Checklist and Short Response Rubric to guide their written responses.

> ▸ Students independently respond to the Quick Write prompt.
> 💬 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing   5%

Display and distribute the homework assignment. For homework, instruct students to begin researching unknown topics using their inquiry questions developed in class as a guide. Remind students to consult other teachers, librarians, media specialists, books, the Internet, or any other available resource. The purpose of exploring a topic at this stage is to identify areas of interest within the topic and explore the dimensions of a topic. Instruct students to write 1–2 sentences identifying their area of interest within their research topic and come to the following lesson prepared to discuss one area of interest.

ⓘ Explain to students that a media specialist can be the person who operates audio-visual equipment, the librarian, a teacher with broad knowledge of media resources and the communication process, or one who helps other teachers or students locate an array of resources.

It may be helpful to identify ahead of time the appropriate person/people in the building who will assist students with locating resources for their research.

▸ Students follow along.

Homework

Use your inquiry questions to guide your research and begin exploring various dimensions of a topic. Consult other teachers, media specialists, librarians, books, the Internet, or any other available resources. Begin to identify areas of interest within your research topic. Write 1–2 sentences identifying your area of interest within your research topic and be prepared to discuss one area of interest in the following lesson.

Model Topic Tracking Tool

Name:		Class:		Date:	

Topic	Page Number(s)	Key Information About the Topic from the Text
behaviorism	9–14	Grandin writes that behaviorism dominated the whole field of psychology. To behaviorists "environment was the only thing that mattered." They thought animals had no emotions only behaviors.
B.F. Skinner	9–12	Dr. Skinner was, according to Grandin, "the god of psychology." He was a very influential behaviorist thinker.
ethology	11	Ethology is a field of animal psychology as well. Although the big difference from behaviorism is that, "ethologists study animals in their natural environment."
meatpacking industry	12	Grandin writes about her work in the meatpacking industry. A system she designed is being used in "half of all the plants in North America." She writes that environment is very important for an efficient cattle plant.
classical operant conditioning	11, 13	Grandin writes about classical operant conditioning in relation to a study done with autistic children: "having the kids go over and over the behaviors."

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File: 9.3.1 Lesson 3 **Date:** 1/17/14 **Classroom Use:** Starting 1/2014

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Posing Inquiry Questions Handout

Name:		Class:		Date:	

Generating Questions

In this module, *Animals in Translation* is a starter or "seed text" that helps generate potential topics that drive the research process. Topics that are identified in the text will be used to pose inquiry questions. These inquiry questions will help illuminate different potential areas of investigation within a research topic. When generating inquiry questions, it is often a good idea to brainstorm as many as possible before selecting and refining the richest ones. Here are several to help you get started:

- How is the topic defined?
- What are its major aspects?
- Where did it originate?
- What are its causes and implications?
- What is its history?
- What other things is it connected to or associated with?
- What are its important places, things, people, and experts?

Selecting and Refining Questions

Once the brainstorming process is completed, it is important to review and select the strongest questions generated. Use these questions to assist with selecting and refining the strongest inquiry questions:

Are you genuinely interested in answering your question?

There is a lot of work involved in research and genuine interest motivates the research process. The best questions are about things that are interesting to individual researchers and what they consider to be valuable information.

Can your question truly be answered through your research?

Some questions are unanswerable (Are there aliens on Jupiter?) or take years to answer (What is the meaning of life?). A good inquiry question must be realistic and researchable.

Is your question clear? Can you pose your question in a way that you and others understand what you are asking?

Good inquiry questions are straightforward and not confusing. If the question has two parts it may be better to separate the parts to form two new questions.

What sort of answers does your question require?

Questions that can be answered with a simple YES or NO generally do not make good inquiry questions. Good inquiry questions should support lots of investigation that may even lead to multiple answers, and more questions. For example, the question "What are the characteristics of autism?" could lead to asking questions about how these characteristics are defined and when they were first discovered.

Do you already know what the answer is?

Good inquiry questions are actually questions that cannot be answered immediately. The research process involves inquiry, finding more information about a question, and developing a perspective based on the evidence discovered and this cannot happen if the question is already answered or too simplistic. For example there is a big difference between the question, "Do I know anyone with autism?" (an easily answered question that requires little research) and, "What is the history of autism?" (a question that would require a lot of research).

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9.3.1	Lesson 4

Introduction

In this lesson, students will read and analyze pages 14–16 of *Animals in Translation* (from "The other major contribution behaviorists made" to "no one had ever seen before"). Students will continue to examine Grandin's analysis of behaviorism and ethology, and consider how this portion of text further refines and develops her central idea that autism has made understanding animals easy.

Students will continue to record, discuss, and track potential topics for research. They will also generate inquiry questions based on topics they have identified in the text to guide their research. Students will share these questions in small groups and discuss similarities and differences between questions on the same topic. The lesson assessment is an independent writing prompt that asks students to demonstrate how the central idea in this text is further developed and refined in pages 9–16. For homework, students will continue to conduct research based on the inquiry questions they have developed in class and identify three areas of interest within the topic.

Standards

Assessed Standard(s)	
RI.9-10.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
Addressed Standard(s)	
RI.9-10.1.a	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s).
RI.9-10.4	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).
SL.9-10.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

Assessment

Assessment(s)
The learning in this lesson is captured through a Quick Write at the end of the lesson. Students answer the following prompt based on the close reading (citing text evidence and analyzing key words and phrases) completed in the lesson. • How does Grandin further develop and refine the idea that her autism provides a unique perspective on animal behavior in pages 9–16? ⓘ This assessment will be evaluated using the Short Response Rubric. ⓘ Although students read pages 14–16 in this lesson, this assessment focuses on the comprehensive development and refinement of Grandin's central idea over pages 9–16. This will help prepare students for the End-of-Unit Assessment.
High Performance Response(s)
A high performance response may include the following: • Grandin says, "In my student days even though everyone was against anthropomorphizing animals, I still believed it was important to think about the animals' point of view." Grandin has a "pretty good grounding in ethology" and this allowed her to recognize that instincts were an example of something that "had nothing to do with the environment." She also uses ideas from behaviorism: "Until behaviorism came along, probably no one understood how important the environment is." Grandin explains that behaviorists and most ethologists considered looking from the animal's point of view to be illegal. As a result "neither group looked inside the animal's head." Because she is autistic, Grandin knows how important studying the brain is, and says that "the brain is pretty powerful, and a person whose brain isn't working right knows just how powerful." Through all of this understanding she came to the conclusion that understanding an animal's perspective is important to understanding their behavior. This further develops her central idea that her autism proves a unique perspective on animal behavior.

Vocabulary

Vocabulary to provide directly (will not include extended instruction)
• contribution (n.) – the part played by a person or thing in bringing about a result or helping something to advance • environmentalists (n.) – people who consider that environment is the primary influence on the development of a person, group, or animal

Vocabulary to teach (may include direct word work and/or questions)
• anthropomorphize (v.) – to attribute human form or behavior to an animal, object, etc.

Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
Standards & Text:	
• Standards: RI.9-10.2, RI.9-10.1.a, RI.9-10.4	
• Text: *Animals in Translation* (pp. 14–16)	
Learning Sequence:	
1. Introduction of Lesson Agenda	1. 5%
2. Homework Accountability	2. 10%
3. Pages 14–16 Reading and Discussion	3. 40%
4. Generating Inquiry Questions	4. 30%
5. Quick Write	5. 10%
6. Closing	6. 5%

Materials

- Student copies of the **Topic Tracking Tool** (refer to 9.3.1 Lesson 2)
- Student copies of the **Posing Inquiry Questions Handout** (refer to 9.3.1 Lesson 3)
- Student copies of the **Short Response Checklist and Short Response Rubric** (refer to 9.3.1 Lesson 1)

Learning Sequence

How to Use the Learning Sequence	
Symbol	**Type of Text & Interpretation of the Symbol**
10%	**Percentage indicates the percentage of lesson time each activity should take.**
no symbol	Plain text indicates teacher action.
	Bold text indicates questions for the teacher to ask students.
	Italicized text indicates a vocabulary word.
▶	Indicates student action(s).
💬	Indicates possible student response(s) to teacher questions.
ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Lesson Agenda   5%

Begin by reviewing the agenda and assessed standard for this lesson: RI.9-10.2. Explain that in this lesson students continue to read pages 14–16 of *Animals in Translation*, track potential research topics, generate inquiry questions, and examine how this section of text further develops and refines Grandin's central idea.

▸ Students look at the agenda.

Activity 2: Homework Accountability   10%

Instruct students to form pairs and do a Turn-and-Talk about the area of interest they identified and the inquiry question that led to that area of interest.

💬 Student responses will vary based on the individual research they conducted. Look for students to use language such as:

- o A topic I identified in the Grandin text was behaviorism. She wrote a lot about behaviorists and how they study animals and people.
- o One of the inquiry questions I came up with in class was, "What are important discoveries behaviorists have found when observing animals?"
- o I consulted the media specialist at the library and gave me guidance on how to find reliable information online for this topic. I found information about understanding animal behavior and training animals.
- o An area of interest I have is animal behavior, and how that can help people train them.

Activity 3: Pages 14–16 Reading and Discussion   40%

Introduce and display the Quick Write assessment prompt (How does Grandin further develop and refine the idea that her autism provides a unique perspective on animal behavior in pages 9–16?). Explain to students that this is the lesson assessment and the focus for today's reading.

▸ Students read the assessment and listen.

ⓘ Display the Quick Write assessment for students to see.

Instruct students to take out their Topic Tracking Tool for the purpose of recording potential research topics. Instruct students to form pairs and read pages 14–15 from "The other major contribution behaviorists made" to "At least that's what I was trying to do." Instruct student pairs to discuss the following questions and then record their responses in writing. Explain that an important vocabulary

word in this section is *contribution*, "the part played by a person or thing in bringing about a result or helping something to advance." Display the following questions for students.

ⓘ For potential student topics for this reading, see the Model Topic Tracking Tool at the end of this lesson.

▸ Student pairs take out their Topic Tracking Tool, read, discuss, track topics, and record responses to the following questions.

What does being a "close observer" of behavior allow Grandin to do?

🗨 Being a close observer allows her to "spot tiny changes in an animal's behavior quickly, and connect the changes to something in the environment."

What do ethologists and behaviorists agree on?

🗨 Ethologists and behaviorists both "study animals in their natural environment" and both agree that "anthropomorphizing an animal is wrong."

Why were "behaviorist principles" (general laws or truths from which others are derived) important for John Ross to remember?

🗨 Behaviorist principles were important because John Ross should have thought about "Jason's environment instead of about his 'psychology.'" Behaviorists wouldn't have made the mistake of thinking the dog was ashamed.

What details from the story of John Ross and Jason can help make meaning of the word *anthropomorphize*? What does it mean to *anthropomorphize* an animal?

🗨 Grandin writes that John Ross said he was being anthropomorphic when he saw his dog Jason "take off running" whenever there was garbage on the floor. He assumed the dog had human characteristics like shame. "Mr. Ross thought…Jason knew that strewing garbage clear across the kitchen was wrong, and ran away because he felt bad." To *anthropomorphize* an animal means to think of that animal as if it is human.

ⓘ **Differentiation Consideration:** If students struggle to define *anthropomorphize* through context, consider explaining that this is a word that could also be defined using vocabulary definition skills such as taking the root word "anthro," and connecting it to other words that have the same root such as "anthropology," which is the study of humans; thus, a word that also starts with "anthro" will also involve thinking about humans in some way.

Why does Grandin believe *anthropomorphizing* animals can be dangerous to them?

🗨 Grandin believes *anthropomorphizing* animals can be dangerous to them because animals think differently from humans, and attributing human thoughts and motivations to animals means misunderstanding how animals think. Grandin uses the example of a lion that ate a pillow because its owner thought the lion would want a pillow to lie on, but instead the lion died.

What does Grandin mean by "I wasn't looking at the lion as a person, but as a lion"? How does this statement further develop her central idea?

🗨 Grandin makes the point that "well, no, he doesn't want a pillow, he wants something soft to lie on, like leaves and grass." So the intention to give the lion something comfortable to sleep on was correct, but "looking at the lion…as a lion" means that you would give the lion what they would usually use to lie on, like grass, instead of something humans use, like a pillow. This further develops her central idea because it is an illustration of how her autism allowed her to think from an animal's perspective and ultimately (through her work) understand animals and keep them out of distressing situations and environments.

Instruct student pairs to continue reading pages 15–16 from "That kind of thinking was illegal for behaviorists" to "started developing complex behaviors no one had ever seen before." Direct student pairs to continue to record topics, discuss their responses to the following questions, and then record their responses in writing. Explain that an important vocabulary word in this section is *environmentalists:* people who consider environment to be the primary influence on the development of a person, group, or animal. Display the following questions for students.

▸ Student pairs read, discuss, track topics, and record responses to the following questions.

Why did Grandin not endorse the experiments at her university?

🗨 Grandin was opposed to these experiments because they were "nasty experiments" and she did not understand what the psychologists were learning from them. Grandin also believes that since the environment in a lab is "totally artificial" it is not an effective way to learn about animals.

How does Grandin include behaviorist and ethologist thinking in her perspective? What makes her perspective distinct from both fields of study?

🗨 Grandin has a "pretty good grounding in ethology" and this allowed her to recognize that instincts were an example of something that "had nothing to do with the environment." She also uses ideas from behaviorism: "Until behaviorism came along, probably no one understood how important the environment is." Grandin's perspective is unique because she decided to try and view the animal's perspective, "neither group looked inside the animal's head."

Activity 4: Generating Inquiry Questions   30%

Explain to students that they will continue to generate inquiry questions about the possible research topics they have identified in the text. Instruct students to refer back to the Posing Inquiry Questions Handout from the previous lesson. Remind students that inquiry questions guide the research process and develop further pathways for exploration. Explain that at this stage it is helpful to think of as many questions as possible and that in the following lesson they will focus on refining their inquiry questions. Inform students they will be placed into groups of four to five students that work together throughout the module. First, this group decides on a topic identified in this portion of text. Then, the students break into subgroups of two or three. These subgroups generate and record five inquiry questions before rejoining their larger group and sharing their questions. Explain to students that in this lesson, they will continue the work of collaborative discussion outlined in SL.9-10.1, to which students were previously introduced. Remind students these discussion strategies have been taught in previous modules.

ⓘ Consider reminding students of the skills inherent in the sub-standards of Standard SL.9-10.1, to which students were previously introduced.

ⓘ Remind student groups that it is important to discuss which questions they have identified are similar and which ones are different. Also, students should discuss if there are any questions that would be broader and lend themselves to a rich understanding of the topic.

ⓘ Place students in heterogeneous groups of four to five that will remain consistent throughout the module. Consider forming groups ahead of time to maximize the range of different research topics and questions within each group. The goal of these groups is to create small communities of inquiry/research teams that provide support and accountability to each other. Students should know about their teammates' topics, research questions, central claims, etc. Students should share claims and evidence that arise from their individual inquiry and learn from each other's research processes, which they may use to refine their own inquiry topics and questions.

▸ Students form groups of four or five students to decide on a topic.

🗨 Student topics will vary.

▸ Students form subgroups of two or three students, and generate five inquiry questions in pairs.

🗨 Student responses will vary based on their individual potential research topics. Student responses may include the following:

    o Topic: Laboratory experiments on animals
    o Potential inquiry questions may include:
        ▪ What are the benefits of experimenting on animals?
        ▪ Why are people critical of laboratory experiments on animals?

- What is the worst experiment ever done on an animal in a laboratory?
- Who is the most famous laboratory animal?
- Which animals are used most often in laboratory experiments?

Instruct student subgroups to rejoin their groups after generating five inquiry questions and to discuss their questions within their groups. Ask students to independently record the five inquiry questions generated by the other subgroup in their group. Explain that these inquiry questions as well as the ones they generated yesterday will help guide their searches for homework.

▶ Students follow along and record five inquiry questions based on group discussion.

Activity 5: Quick Write   10%

Instruct students to respond briefly in writing to the following writing prompt:

How does Grandin further develop and refine the idea that her autism provides a unique perspective on animal behavior?

Remind students to use the Short Response Checklist and Short Response Rubric to guide their written responses.

ⓘ Display the prompt for students to see, or provide the prompt in hard copy.

▶ Students independently answer the prompt using evidence from the text.

🗨 See the High Performance Response at the beginning of the lesson.

Activity 6: Closing   5%

Display and distribute the homework assignment. For homework, instruct students to continue researching unknown topics gathered from this lesson's reading and use inquiry questions generated in their groups to guide their searches. Remind students to consult media specialists, books, the Internet, or any other available resource. The purpose of exploring a topic at this stage is to identify areas of interest within the topic and to explore the dimensions of a topic. Instruct students to identify three areas of interest within the topic using the inquiry questions.

Additionally, ask students to preview and annotate *Animals in Translation,* pages 16–20 (from "The only research I was interested in doing" to "Why couldn't they see what they were doing wrong?") and be prepared to discuss 3–4 annotations in the following lesson.

▶ Students follow along.

Homework

Based on your inquiry questions from this lesson, continue exploring various dimensions of a topic. Use your inquiry questions to guide your research. Using inquiry questions from the lesson, identify three areas of interest within your topic.

Also, preview and annotate *Animals in Translation,* pages 16–20 (from "The only research I was interested in doing" to "Why couldn't they see what they were doing wrong?") and be prepared to discuss 3–4 of your annotations in the following lesson.

Model Topic Tracking Tool

Name:		Class:		Date:	

Topic	Page Number(s)	Key Information About the Topic from the Text
Anthropomorphizing animals	14–15	In this portion of text Grandin writes a lot about anthropomorphizing animals, or giving them human attributes. Grandin writes that both behaviorists and ethologists think it can be dangerous to animals: "everyone was against anthropomorphizing animals."
Dog training	14–15	Grandin writes briefly about how anthropomorphizing can be a problem when training a dog to behave. "He wasn't running away because he felt guilty…he felt scared."
John Ross	14–15	John Ross is mentioned in this portion of reading as a professional trainer as well as an author of the book "Dog Talk."
Ron Kilgour	15	Grandin writes about "a great animal psychologist out of New Zealand named Ron Kilgour." This is the only ethologist Grandin mentions by name in this portion of reading.
Laboratory experiments on animals	16	When Grandin was in university there were a lot of scientists doing "nasty experiments" on monkeys. Grandin believes that there should be something clear that can be learned if experiments that harm animals are going to happen.

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9.3.1　Lesson 5

Introduction

In this lesson, students reread and analyze pages 16–20 of *Animals in Translation* (from *"*The only research I was interested in doing*"* to *"*Why couldn't they see what they were doing wrong?*"*). In this passage Grandin explains what it means to be a visual thinker. Students will continue to examine the ways that Grandin develops her central idea (autism has made understanding animals easy) in this chapter. The lesson assessment asks students to analyze how Grandin unfolds an analysis or series of events.

Students will continue to track topics in the text and generate inquiry questions. Students will also begin selecting and refining inquiry questions for research. For homework, students will read and annotate pages 20–23. Additionally, students will choose one topic, generate five inquiry questions, and select and revise two of those inquiry questions.

Standards

Assessed Standard(s)	
RI.9-10.3	Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.
Addressed Standard(s)	
RI.9-10.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
SL.9-10.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

Assessment

Assessment(s)
The learning in this lesson will be captured through a Quick Write at the end of the lesson. Students will

answer the following prompt based on the close reading (citing evidence from the text and analyzing key words and phrases) completed in the lesson.

- Analyze how Grandin unfolds an analysis or series of ideas or events, including the order in which she makes her points. Discuss how Grandin introduces and develops her points and the connections she draws between them.

ⓘ This assessment is evaluated using the Short Response Rubric.

High Performance Response(s)

A high performance response may include the following:

- Grandin begins her story with the central idea that her autism enables her to "understand the way animals think" (p. 1). Grandin further develops and refines this idea when she describes what it means to be a "visual thinker." She does it in several steps. She begins by saying that she does not mean "just that [she's] good at making architectural drawing and designs." She then explains that she "actually thinks in pictures." When she thinks, she "has no words in [her] head" (p. 17). She then offers two examples: she cannot understand economics or algebra because she cannot visualize them. Grandin explains that her visual thinking ability helps her see and understand what animals see.

- Grandin begins her story with the central idea that her autism enables her to "understand the way animas think" (p. 1). She explains that she is a visual thinker. She thinks in pictures. Grandin develops and refines what it means with an example of a court. She says: "If you think about a judge and jury, all deliberations are in pictures." She explains that words do not "come in" until her thought process is complete. Her "final judgment," her "final verdict," only these are "in words" (p. 17). Grandin explains that her visual thinking ability helps her see and understand what animals see.

Vocabulary

Vocabulary to provide directly (will not include extended instruction)
• refining (v.) – making more fine, subtle, or precise

Vocabulary to teach (may include direct word work and/or questions)
• obsolete (adj.) – no longer in use • gravitated (v.) – was attracted by, as if by an irresistible force

File: 9.3.1 Lesson 5 **Date:** 1/17/14 **Classroom Use:** Starting 1/2014

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Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
Standards & Text:	
• Standards: RI.9-10.3, RI.9-10.2, SL.9-10.1	
• Text: *Animals in Translation* (pp. 16–20)	
Learning Sequence:	
1. Introduction of Lesson Agenda	1. 5%
2. Homework Accountability	2. 10%
3. Pages 16–20 Reading and Discussion	3. 40%
4. Refining Inquiry Questions	4. 30%
5. Quick Write	5. 10%
6. Closing	6. 5%

Materials

- Student copies of the **Topic Tracking Tool** (refer to 9.3.1 Lesson 2)
- Student copies of the **Posing Inquiry Questions Handout** (refer to 9.3.1 Lesson 3)
- Student copies of the **Short Response Rubric and Checklist** (refer to 9.3.1 Lesson 1)

Learning Sequence

How to Use the Learning Sequence	
Symbol	**Type of Text & Interpretation of the Symbol**
10%	**Percentage indicates the percentage of lesson time each activity should take.**
no symbol	Plain text indicates teacher action.
	Bold text indicates questions for the teacher to ask students.
	Italicized text indicates a vocabulary word.
▶	Indicates student action(s).
🗨	Indicates possible student response(s) to teacher questions.
ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Lesson Agenda   5%

Begin by reviewing the agenda and assessed standard for this lesson: RI.9-10.3. Explain that today students continue reading and analyzing pages 16–20 of *Animals in Translation*, track potential research topics, as well as generate and refine further inquiry questions.

▸ Students follow along and read the agenda.

Activity 2: Homework Accountability   10%

Instruct students to form pairs to do a Turn-and-Talk, discussing 3–4 annotations and why they annotated those sections of text from pages 16–20 in *Animals in Translation*.

▸ Students do a Turn-and-Talk and discuss 3–4 annotations.

Have students share out the annotations they discussed.

🗨 Students responses may include the following:

- o Boxes around the words: macroeconomics, macramé, obsolete, gravitated, spectrum, anthropomorphic
- o Star near title of section: "Seeing the Way Animals See:" – This is an interesting concept, looking at the way animals see.
- o Star near "I'm a visual thinker." – The narrator combines seeing with thinking.
- o Star near "I flunked algebra." – She makes a connection between visual thinking and flunking algebra, since she could not visualize it.
- o Star near "final judgment" – The idea is that when she thinks it is in pictures, not words. Those only appear after she has visualized the facts.
- o Star near "when I was young" – This points to the fact that her special way of seeing things sets her apart from others even if earlier on she did not realize it.
- o Underline the sentence in italics: "*You get food by being highly attuned to the visual environment.*" – This sentence must be important since it is in italics. She is making the connection between what animals see and their survival.
- o Underline "Well let's look at it from the animal's point of view." – She uses the quote to tell us what her thoughts were when she decided that in order to understand the problem the animals were having she needed to see it from their perspective.

Instruct student pairs to discuss their three potential areas of interest using their inquiry questions generated in the previous lesson.

▸ Students discuss their three areas of interest in pairs.

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💬 Student responses may include:

- o Based on the topic of Anthropomorphizing Animals there were a few areas of interest I identified.
- o One of my inquiry questions was, "How have people anthropomorphized animals throughout history?"
- o Using this inquiry question, I searched for different ways people have anthropomorphized animals throughout history.
- o One area that interests me is the way that people have told stories using anthropomorphized animals. This happens in fables and lots of other stories.
- o I also found that anthropomorphizing did not start with animals but with gods. Zeus is an example of an anthropomorphized god, meaning that he was a god who behaved like a person sometimes—he got angry, jealous, etc.
- o I would also be interested in researching how anthropomorphizing has affected the way humans have treated different kinds of animals.

ⓘ This response is an example of what students might discuss as a potential area of interest based on a topic from the previous lesson. This activity is priming students to use the Exploring A Topic Tool in Lesson 6.

Activity 3: Pages 16–20 Reading and Discussion   40%

Introduce the Quick Write assessment (Analyze how Grandin unfolds an analysis or series of ideas or events, including the order in which she makes her points. Discuss how Grandin introduces and develops her points and the connections she draws between them). Explain to students that this is the lesson assessment and the focus for today's reading.

▸ Students read the assessment and listen.

Instruct students to form pairs, take out their Topic Tracking Tool, and read *Animals in Translation*, pages 16–18 from "The only research I was interested in doing" to "it was just what I naturally gravitated to." Direct student pairs to discuss their answers and then record them in writing. Remind students to also record potential topics for research as they read. Display the following questions for students.

ⓘ For potential student topics for this reading see the Model Topic Tracking Tool at the end of this lesson.

▸ Student pairs reread, discuss, track topics, and record their answers to the following questions.

How does Grandin explain what it means to be a "visual thinker?"

🗨 Grandin articulates what it means to be a "visual thinker" in several steps. She begins by saying that she does not mean "just that [she's] good at making architectural drawing and designs." She then explains that she "actually thinks in pictures." When she thinks, she "has no words in [her] head" (p. 17). She then offers two examples: she cannot understand economics or algebra because she cannot visualize them.

How does the word *obsolete* further contribute to Grandin's explanation of the "visual thinker"?

🗨 Grandin says that she knew that the dot-com industry would suffer a crisis (which it did). She argues that since she could not visualize these companies, they would fail. What she did see were images of "rented office space" and computers that "would be obsolete in two years" (p. 17). In this context the rented office space and computers were no longer in use.

How does Grandin use the concept of judge and jury to explain her thought process?

🗨 Grandin describes her thought process: "If you think about a judge and jury, all deliberations are in pictures." She explains that words do not "come in" until her thought process is complete. Her "final judgment," her "final verdict," only these are "in words" (p. 17).

ⓘ If students struggle with this question due to lack of background knowledge about the legal process, ask if they can determine the meanings of the words "deliberations" and "verdict" from the context of this paragraph. The author makes a fairly explicit connection, but it is worthwhile to confirm that students understand these references.

Why did Grandin *gravitate* to the animals' visual environment? What does the word *gravitate* mean in this sentence?

🗨 Grandin explains that she did not like the lab work. She *gravitated* toward, or was drawn instead, to the animals' "natural environment." She knew that she would learn more when she shared their "visual environment." One may infer that she wanted to be able to see what the animals saw.

Instruct student pairs to continue reading pages 18–20 from "Being verbal thinkers, behaviorists hadn't really thought about" to "Why couldn't they see what they were doing wrong?" Direct student pairs to discuss their answers and then record them in writing. Remind students to continue tracking potential research topics. Display the following questions for students.

▶ Student pairs reread, discuss, track topics, and record their answers to the questions.

What are "verbal thinkers" and what do they fail to realize?

🗨 "Verbal thinkers," unlike "visual thinkers," think in words. They do not consider the animals' "visual environment." In the wild, animals "*get food by being highly attuned to the visual environment*" (p. 19).

How does Grandin make the connection between her visual thinking ability and her research?

🗨 In this passage, Grandin specifically mentions her research. She describes the move she made from the lab to the yard. She was investigating a problem: the animals did not want to go through "the chutes," the "narrow passages." She knew that the problem, and therefore the solution, had to be visual. She determined that in order to solve the problem she had to see what the animals see.

Activity 4: Refining Inquiry Questions   30%

Remind students that in the two previous lessons they have been generating inquiry questions, and in this lesson they will focus on selecting and refining the best questions to support rich inquiry and research. Display and ask students to retrieve the Posing Inquiry Questions Handout. Instruct students to first form the same research groups of four to five students they established in the previous lesson. Instruct each group to generate five inquiry questions based on the topics recorded in this lesson.

ⓘ The heterogeneous groups of four to five students were established in the previous lesson.

ⓘ Explain to students that to *refine* means "to make more fine, subtle, or precise." Students will make their questions better and more precise after using the questions on the Posing Inquiry Questions Handout.

▸ Students take out their Posing Inquiry Questions Handout and form the same research groups from the previous lesson. Student groups begin generating inquiry questions.

🗨 Students responses may include:

- o Topic: Visual thinking
- o Inquiry Questions:
  - What are the causes of visual thinking?
  - What are the major aspects of visual thinking?
  - Who are famous visual thinkers?
  - What are the benefits of visual thinking compared to verbal thinking?
  - What has been a major contribution of visual thinking to science?

File: 9.3.1 Lesson 5 **Date:** 1/17/14 **Classroom Use:** Starting 1/2014

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Direct student groups to read the Selecting and Refining Questions portion of the Posing Inquiry Questions Handout. Explain that choosing strong inquiry questions, just like using strong evidence when making a claim, is an important part of the research process. Explain to students that they need strong inquiry questions to support thorough research. Remind students that as they use the Selecting and Refining portion of this handout they will not always be able to answer every question without doing some initial investigation, like they have done for homework in the previous lessons. For example, the question "Can your question be truly answered through research?" may require some exploration to answer.

▸ Student groups follow along and read the Selecting and Refining portion of the Posing Inquiry Questions Handout.

Display the following inquiry question for students: "What is visual thinking?" Explain that it is possible to determine the strength of this inquiry question by using the Selecting and Refining section of the handout. Model for students how to answer these questions using the "Think Aloud" technique.

Are you genuinely interested in answering your question?

🗨 Yes, I would like to know more about visual thinking.

Can your question truly be answered through your research?

🗨 I am sure I can find out more about visual thinking but I would need to do some exploration.

Is your question clear? Can you pose your question in a way that you and others understand what you are asking?

🗨 This is a clear question although not everyone may know the meaning of the word *visual*.

What sort of answers does your question require?

🗨 This question requires an explanation of the process of visual thinking but it might not be very long.

Do you already know what the answer is?

🗨 From reading *Animals in Translation*, I actually already know about visual thinking, which means to think in pictures.

▸ Student groups follow along as the teacher models responses to the questions.

Ask student groups:

Based on the responses to the questions in the Selecting and Refining section, is this a good inquiry question?

💬 No, this inquiry question can already be answered using the Grandin text. It would not be a strong question for research.

Display the following example inquiry questions: 1. "Who are famous visual thinkers?" 2. "What are the benefits of visual thinking compared to verbal thinking?" Instruct students to use the Selecting and Refining questions in their groups to decide which question is a stronger inquiry question. Explain to students that in this lesson, they will continue the work of collaborative discussion outlined in SL.9-10.1, to which students were previously introduced. Remind students these discussion strategies have been taught in previous modules. Ask student groups to go through and discuss each of the Selecting and Refining questions for the first inquiry question, and then repeat the process for the second inquiry question.

ⓘ Consider reminding students of the skills inherent in the sub-standards of Standard SL.9-10.1, to which students were previously introduced.

▸ Student groups use the Selecting and Refining questions on the Posing Inquiry Questions Handout for the displayed inquiry questions.

Ask student groups to share which of the inquiry questions (1 or 2) is a stronger inquiry question and which Selection and Refining questions assisted with their understanding.

▸ Student groups share which question is a stronger inquiry question.

💬 "What are the benefits of visual thinking compared to verbal thinking?" is a stronger inquiry question because it would have a more complicated answer than just finding famous visual thinkers. We also already know that Temple Grandin is a famous visual thinker, and question 1 does not necessarily illuminate potential areas of investigation as it can be answered by identifying individuals who are famous visual thinkers.

Instruct student groups to use the Selecting and Refining questions to select the strongest of the five inquiry questions they generated in this lesson. Explain that the purpose of selecting and refining is to prepare them for their homework assignment, which is to select a topic, generate inquiry questions, and select and refine the two strongest inquiry questions.

▸ Student groups use the Selecting and Refining questions to choose the strongest inquiry question from the five they generated in this lesson.

💬 Student responses will vary depending on the topic, inquiry questions, and refining process.

Activity 5: Quick Write   10%

Instruct students to respond briefly in writing to the following prompt:

How does Grandin unfold an analysis or series of ideas or events, including the order in which the points are made? Discuss how they are introduced and developed, and the connections that are drawn between them.

Remind students to use the Short Response Checklist and Rubric to guide their written responses.

ⓘ Display the prompt for students to see, or provide the prompt in hard copy.

▸ Students independently answer the prompt using evidence from the text.

🗨 See the High Performance Response at the beginning of this lesson.

Activity 5: Closing   5%

Display and distribute the homework assignment. For homework, instruct students to read and annotate pages 20–23 from "I remember one situation in particular" to "The cows all walked into the chute just as nice as could be." In addition, instruct students to select a topic from the Topic Tracking Tool, and use the Generating Questions and Selecting and Refining Questions sections of the Posing Inquiry Questions Handout to generate five inquiry questions and select, as well as refine, two of those inquiry questions. Remind students to be prepared to discuss their topic and the inquiry questions they selected and refined in the following lesson.

▸ Students follow along.

Homework

For homework, first read and annotate pages 20–23 from "I remember one situation in particular" to "The cows all walked into the chute just as nice as could be." Be prepared to discuss 3–4 of your annotations. Second, select one topic from all of the topics recorded on your Topic Tracking Tool. Use the Generating Questions and Selecting and Refining Questions sections of the Posing Inquiry Questions Handout to generate five inquiry questions and select, as well as *refine*, two of those inquiry questions. Be prepared to discuss your topic and the inquiry questions you selected and refined in the following lesson.

Model Topic Tracking Tool

Name:		**Class:**		**Date:**	

Topic	Page Number(s)	Key Information About the Topic from the Text
Visual thinking	16–20	This portion of text is largely about Grandin's process of visual thinking and how it has helped her understand animals. She describes visual thinking as, "During my thinking process I have no words in my head at all, just pictures."
Visual illusions	16, 19	Grandin writes that as a student she was only interested in "studying visual illusions in animals." She experimented with visual illusions on cattle and tried to determine why some cattle might not want to go through chutes.
Skinner Box	18	In this text Grandin references the Skinner Box which is "a special cage…behaviorists used to test and analyze a rat's behavior." This is a specific device used in behaviorist experiments. Grandin also says that in the Skinner box "usually the punishment would be a shock."
Environment affecting behavior	19	Grandin ties in visual thinking with how environment affects animal behavior using an example of cattle and a ladder: "Those cattle would just not walk by that ladder."

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9.3.1	Lesson 6

Introduction

In this lesson, students continue to read *Animals in Translation* by Temple Grandin, from "I remember one situation in particular" to "The cows all walked into the chute just as nice as could be" (pp. 20–23). In this excerpt, Grandin describes how she is able to solve an animal related problem due to her unique perspective.

Through an evidence-based discussion, students continue to examine the ways Grandin introduces and develops her ideas, specifically as she unfolds an analysis of problems in the cattle industry. A series of questions will guide small group and class discussion. The lesson assessment asks students to analyze how Grandin introduces and develops her discussion of the cattle industry and how it helps refine a central idea of the text. Additionally, students continue their research work by considering and choosing areas of investigation. Students will glean these areas of investigation from larger topics and inquiry questions posed in earlier lessons.

For homework, students will preview the following lesson's text excerpt by reading and annotating from "That feedlot consultation was the king of thing," to "I hope what I've learned will help people see" (pp. 24–26). They will consider how Grandin further develops and refines the central idea in this last excerpt. Additionally, students will complete the **Exploring a Topic Tool** for their selected areas of investigation.

Standards

Assessed Standard(s)	
RI.9-10.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
RI.9-10.3	Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.
Addressed Standard(s)	
W.9-10.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Assessment

Assessment(s)
The learning in this lesson will be captured through a Quick Write at the end of the lesson. Students will answer the following prompt based on the evidence-based discussion conducted in the lesson. • How does Grandin introduce and develop her discussion of the cattle industry? How does this discussion develop and refine a central idea of the text? ⓘ This assessment will be evaluated using the Short Response Rubric.
High Performance Response(s)
A high performance response may include the following: • Grandin introduces a problem that an owner of a "cattle-handling facility" encountered. The cattle refused to "walk into a squeeze chute." Grandin explains that neither the chute nor the shots bother the cows. Something else caused the problem. And since vaccinations of cattle are essential, the owner, according to Grandin, "was starting to panic" (p. 20). The reason for the panic was the greater problem; the consequences of the situation would lead to lack of income. Grandin explains how her unique skills, due to her autism, helped her solve the problem. In order to figure out what was wrong with the animals, people must "*try to see what the animal is seeing*" (p. 23). Once she did that she identified what was wrong and she offered an immediate, successful solution.

Vocabulary

Vocabulary to provide directly (will not include extended instruction)
• None.
Vocabulary to teach (may include direct word work and/or questions)
• cower (v.) – to crouch in fear • ambiguity (n.) – uncertainty or inexactness of meaning in language

Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
Standards & Text:	
• Standards: RI.9-10.2, RI.9-10.3, W.9-10.7	
• Text: *Animals in Translation*, by Temple Grandin (pp. 20–23).	
Learning Sequence:	
1. Introduction of Lesson Agenda	1. 5%
2. Homework Accountability	2. 15%
3. Pages 20–23 Reading and Discussion	3. 35%
4. Areas of Investigation	4. 30%
5. Quick Write	5. 10%
6. Closing	6. 5%

Materials

- Student copies of the **9.3 Common Core Learning Standards Tool** (refer to 9.3.1 Lesson 1)
- Student copies of the **Topic Tracking Tool** (refer to 9.3.1 Lesson 2)
- Copies of the **Exploring A Topic Tool** for each student
- Student copies of the **Short Response Rubric and Checklist** (refer to 9.3.1 Lesson 1)

Learning Sequence

How to Use the Learning Sequence	
Symbol	**Type of Text & Interpretation of the Symbol**
10%	**Percentage indicates the percentage of lesson time each activity should take.**
no symbol	Plain text indicates teacher action.
	Bold text indicates questions for the teacher to ask students.
	Italicized text indicates a vocabulary word.
▶	Indicates student action(s).
●	Indicates possible student response(s) to teacher questions.
ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Lesson Agenda   5%

Begin by reviewing the agenda and the assessed standards for this lesson: RI.9-10.2 and RI.9-10.3. Explain that in this lesson, students continue to use evidence-based discussion to examine the ways Grandin introduces and develops her ideas, specifically as she unfolds an analysis of problems in the cattle industry. Additionally, students continue their research work by considering and choosing areas of investigation. These areas of investigation will be gleaned from the larger topics and inquiry questions students have posed in the previous lessons. The lesson concludes with a Quick Write.

▶ Students look at the agenda.

Activity 2: Homework Accountability   15%

Instruct students to form pairs and share their annotation from pages 20–23.

▶ In pairs, students share annotations from pages 20–23.

Ask student volunteers to briefly share out some of their annotations.

🗩 Student annotations may include the following:

- o Boxes around the words: *cower, dwarfism*
- o Underline the sentence: "Thinking about a shot makes it worse."– an interesting observation that humans feel more pain because they think about the shot
- o Star near "pneumonia" – Animals get the same diseases as people. This could lead to a possible topic.
- o Star near "prods" – Doesn't seem right, but what else can they do?
- o Star near several references to "stress" – This whole idea of stress among animals and people and the physical impact seems interesting.
- o Exclamation point near "They were afraid to walk into pitch-black space."
- o Star near *"try to see what the animal is seeing."*

Ask student pairs to now share two of the inquiry questions they developed and refined for homework. Students should identify the topic that the inquiry questions address.

▶ Students share two of their five inquiry questions in pairs.

Have several student volunteers share out their inquiry questions and the topic each question addresses.

🗩 Student responses will vary based on their individual research. Possible student responses may include:

   o Topic: Animal Intelligence
   o Questions: Are animals intelligent? How intelligent are they? What kinds of things can smart animals do?

Explain that the rest of the homework from the previous lesson will be integrated into the Areas of Investigation section of this lesson.

Activity 3: Pages 20–23 Reading and Discussion   35%

Introduce the Quick Write assessment (How does Grandin introduce and develop her discussion of the cattle industry? How does this discussion develop and refine a central idea of the text?). Explain to students that this is the lesson assessment and the focus for today's reading. Instruct students to keep this assessment in mind as they analyze the text.

   ▸ Students read the assessment and listen.

ⓘ Display the Quick Write assessment for students to see.

Transition students to reading and discussion. Instruct students to form small groups to analyze the Grandin text from *"I remember one situation in particular"* to *"The cows all walked into the chute just as nice as could be"* (pp. 20–23).

   ▸ Students form small groups.

Instruct students to take out their Topic Tracking Tool. Explain that they will continue to record potential topics for research as they read and discuss this portion of *Animals in Translation*. Inform students that they will discuss in pairs any potential topics for research that emerge from the text. Remind students to record the topics as well as the key details about the topic from *Animals In Translation* on their Topic Tracking Tool.

ⓘ Potential topics can be found on the Model Topic Tracking Tool at the end of this lesson.

   ▸ Students take out their Topic Tracking Tool, read, discuss, track topics, and record their answers to the following questions.

What is the "problem" that Grandin describes?

🗩 The owner of a "cattle-handling facility" asked for Grandin's help in solving a problem he had. The cattle refused to "walk into a squeeze chute." Grandin explains that neither the chute nor

the shots bother the cows. Something else created the problem. And since vaccinations of cattle are essential, the owner, according to Grandin, "was starting to panic" (p. 20).

How did the "problem" get even worse?

🗨 To make matters even worse the handlers of the cows, in their attempt to get the cows into the chutes, used prods that gave the animals electric shocks. Grandin says that the prods are "stupid things to use" and caused even more problems. The use of prods endangers handlers. Additionally, the shocks stress the animals. Consequently, they are more likely to get sick; they do not grow as much, and therefore, the owners have less meat to sell. In the case of dairy farms, the cows have less milk.

Read the sentence on page 20 that begins "They'll watch their dog cower and cringe." Based on how the dog reacts when the vet "sticks him with a needle," what can you infer that *cower* means?

🗨 *Cower* is to be scared and crouch down, like a dog with a tail between its legs.

How does Grandin emphasize the impact of stress?

🗨 In order to further emphasize the impact that stress has on animals, Grandin turns to humans. She cites researchers who "have known for quite a while that anxious adults often have low levels of growth hormone" (p. 21). She also points to a case of two orphanages in Germany and reports that the way that the children were treated had an impact on their growth. Children who were treated poorly, even if they had more food, grew less. The "teacher's pets," the "favorites," grew more.

Read the sentence on page 24 that begins, "With animals there is no ambiguity." Based on that sentence, as well as on the discussion in the previous paragraph, what can you infer that *ambiguity* means?

🗨 In the previous paragraph, Grandin is discussing how stress seems to be bad for growth in both boys and girls, but there is more research about stress impacting girls' growth than there is for boys' growth. She just "assumes" it is equally as bad for boys. When she says, "With animals there's no ambiguity: stress is horrible for growth" she means that we do not have to "assume" anything, because it is obvious and true. If there is no *ambiguity*, then *ambiguity* means uncertainty.

How did Grandin figure out the animals' problem?

🗨 In order to figure out what was wrong, Grandin followed the path that the animals take. She quickly realized what the problem was: The animals had to transition from daylight to an "alley that was too dark." Simply put: "They were afraid to walk into pitch-black space" (p. 22).

How does Grandin explain her ability to solve the problem?

🗨 When you have a problem with an animal, Grandin emphasizes: "*try to see what the animal is seeing*" (p. 23). Grandin explains that animals react to changes in their environment. She adds that in order to resolve issues, people must see situations from the animals' point of view.

Activity 4: Areas of Investigation   30%

Direct students to take out the revised inquiry questions from the previous lesson's homework, and explain that these questions are necessary for this activity. In addition, instruct students to take out all of their completed Topic Tracking Tools for reference during this activity. Explain that in this activity, students choose 2–3 areas of investigation based on the topics explored and inquiry questions posed in the previous lessons and revised for homework.

Distribute the Exploring A Topic Tool. Remind students that they have explored several topics, generated inquiry questions for these topics, and now they will begin to identify areas of investigation for research. Explain that while early research discussions produce many topics, now they are narrowing their investigation by focusing on specific aspects of the topic, known as areas of investigation. Through discussions and pre-searches, students will focus on more specific questions and central ideas that they continue to investigate.

Explain that students will explore aspects of the topic.

Post or project the Exploring a Topic Tool to model the three sections/boxes in the tool. Explain that each of the three sections serves a specific purpose to guide their investigation. In each section students must include a well-articulated statement or a question. Encourage them to move beyond the text to areas of investigation that Temple Grandin's story provoked. Explain to students that a sample topic for this investigation is autism.

The purpose of the top box is to identify a narrower theme to focus on.

> In a few words, describe an area within the topic that you would like to know more about.
>
> *Temple Grandin's autism makes her a visual thinker. I want to know more how autistic people think, and whether they are all visual thinkers.*

Instruct students to consider why they are curious about this particular area of investigation and how it may connect to the original topic.

> Explain why you are interested in this area of the topic.
>
> *In the case of Grandin, the explanation for the way that she thinks is her autism. I am interested in finding out more about how autism creates visual thinking and whether or not all autistic people are visual thinkers. I'm curious to learn about the different ways that other autistic people think.*

Explain to students that in conducting research one must ask questions. Their pre-search will begin with a question that will eventually lead to others.

> Express your potential area of investigation as a question or a problem:
>
> *Are all autistic people visual thinkers? If not, how else do autistic people think?*

▸ Students follow along and copy column one onto their tool.

Instruct students to individually work on column two of the Exploring a Topic Tool, completing the three boxes around their area of investigation. Remind students to choose their own topic, not the one used for modeling.

▸ Students independently work on the Exploring a Topic Tool.

Instruct students to talk in pairs about their potential area of investigation that they identified. Then ask volunteers to share out with the class.

▸ In pairs and then with the class, students share potential areas of investigation.

🗨 Student responses will vary based on their individual research conducted. Student responses may include the following:

   o   The topic: Stress
       Interest: The German orphanage story is interesting and I want to look into children today who are growing up in stressful conditions. I am interested in this area of the topic because I want to know more about children who live in stressful situations today.
       Phrased as a question: What effect does stress have on children as they are growing up?
   o   The topic: Animal Intelligence

Interest: I am interested in animal intelligence, and whether or not animals really can do things humans cannot. I am interested in this area of the topic because I want to know more about what animal cognition can tell us about human cognition. For example, if animals and autistic people are both visual thinkers, can studying animals' thinking help us understand autistic people's thinking, or vice versa?

Phrased as a question: What can studying animal intelligence tell us about humans?

Activity 5: Quick Write   10%

Instruct students to respond briefly in writing to the following prompt:

How does Grandin introduce and develop her discussion of the cattle industry? How does this discussion develop and refine a central idea of the text?

Remind students to use the Short Response Checklist and Rubric to guide their written responses.

ⓘ Display the prompt for students to see, or provide the prompt in hard copy.

▸ Students independently answer the prompt using evidence from the text.

🗨 See the High Performance Response at the beginning of the lesson.

Activity 6: Closing   5%

Display and distribute the homework assignment. For homework, instruct students to preview the following lesson's text excerpt by reading and annotating from "That feedlot consultation was the king of thing" to "I hope what I've learned will help people see" (pp. 24–26). Instruct them to consider how Grandin further develops and refines the central idea in this last excerpt. Additionally, instruct students to complete the Exploring A Topic Tool for their selected areas of investigation.

▸ Students follow along.

Homework

Preview the following lesson's text excerpt by reading and annotating from "That feedlot consultation was the king of thing" to "I hope what I've learned will help people see" (pp. 24–26). Consider how Grandin further develops and refines the central idea in this last excerpt. Additionally, complete the Exploring A Topic Tool for your selected areas of investigation.

Model Topic Tracking Tool

Name:		Class:		Date:	

Topic	Page Number(s)	Key Information About the Topic from the Text
Stress	20–21	This portion of text talks about how stress impacts biological functions, like growth. "Stress is bad for human growth."
Stress Dwarfism	21	This portion is specifically about how stress creates a "failure to thrive" and results in "stress dwarfism," where a child is noticeably shorter than others because of the impact stress had on their health.
Prey Animals	22	This portion of text talks about prey animals and how even though they "usually like the dark," they "balk" when they have to turn into a dark space without knowing what is inside.
Animal Sight	23	"Whenever you're having a problem with an animal, *try to see what the animal is seeing*."

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Name .... **Topic** ....

Write a brief account of the class conversation about the topic, describing what you know at this point about some of its aspects:

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POTENTIAL AREA OF INVESTIGATION 1

In a few words, describe an area within the topic that you would like to know more about:

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Explain why you are interested in this area of the topic:

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Express your potential area of investigation as a question or problem:

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EXPLORING A TOPIC

Name .... **Topic** ....

POTENTIAL AREA OF INVESTIGATION 2	POTENTIAL AREA OF INVESTIGATION 3	POTENTIAL AREA OF INVESTIGATION 4
In a few words, describe what you would like to know more about within the topic:	In a few words, describe what you would like to know more about within the topic:	In a few words, describe what you would like to know more about within the topic:
Explain why you are interested in this:	Explain why you are interested in this:	Explain why you are interested in this:
Express your potential area of investigation as a question or problem:	Express your potential area of investigation as a question or problem:	Express your potential area of investigation as a question or problem:

EXPLORING A TOPIC

Name Sample **Topic** Animal Intelligence

Write a brief account of the class conversation about the topic, describing what you know at this point about some of its aspects:

While reading the Grandin chapter, we came across parts where Grandin talked about human vs. animal thinking. For example, she said, "Visual thinkers of any species, animal or human, are detail-oriented." So far, I know that animal thinking and human thinking can be similar at times, especially for people like Grandin, who think visually. I also know that people used to not think at all about animal thinking and would only look at their behavior, but now more people think about the internal world of animals. Grandin also writes that she is looking for ways animals can "perceive things humans can't perceive." I would like to know more about how human thinking compares to animal thinking.

POTENTIAL AREA OF INVESTIGATION 1

In a few words, describe an area within the topic that you would like to know more about:

I would like to know whether studying animal thinking can help us understand human thinking.

Explain why you are interested in this area of the topic:

I am interested in this area of the topic because I want to know more about what animal cognition can tell us about human cognition. For example, if animals and autistic people are both visual thinkers, can studying animals' thinking help us understand autistic people's, or vice versa?

Express your potential area of investigation as a question or problem:

How can studying animal cognition help us learn more about human cognition?

EXPLORING A TOPIC

POTENTIAL AREA OF INVESTIGATION 2	POTENTIAL AREA OF INVESTIGATION 3	POTENTIAL AREA OF INVESTIGATION 4
In a few words, describe what you would like to know more about within the topic: I would like to know if humans or animals are more intelligent.	**In a few words, describe what you would like to know more about within the topic:** I would like to know the history of what people thought about animal intelligence.	**In a few words, describe what you would like to know more about within the topic:** I would like to know how people measure animal intelligence.
Explain why you are interested in this: I am interested in this because I think animals are more intelligent than most people think they are.	**Explain why you are interested in this:** I am interested in this because in Grandin's chapter, she talked about how behaviorists aren't totally correct, but at one point, everyone thought they were. What were some other theories about animals that have changed?	**Explain why you are interested in this:** I am interested in this because I know we measure intelligence by talking to one another, writing essays, and taking tests, but animals can't do those things, so how do we figure out how smart they are?
Express your potential area of investigation as a question or problem: Are animals smarter than humans?	**Express your potential area of investigation as a question or problem:** What is the history of the way people thought about animal intelligence?	**Express your potential area of investigation as a question or problem:** How do people measure animal intelligence?

EXPLORING A TOPIC

9.3.1	Lesson 7

Introduction

In this lesson, students watch an excerpt from the movie *Temple Grandin* in which she presents her cattle chute design to meatpacking industry executives. Students analyze which details are emphasized in film versus those emphasized in the text of *Animals in Translation.* The lesson assessment asks students to reflect in writing on the presentation of this account in the two different mediums.

In this lesson, students also begin to develop inquiry questions based on their proposed areas of investigation. These questions will help students gain more familiarity with their areas of investigation, as well as guide their pre-searches in Lesson 8. For homework, students continue developing inquiry questions for their areas of investigation, and come up with five more possible inquiry questions.

Standards

Assessed Standard(s)	
RI.9-10.7	Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
Addressed Standard(s)	
W.9-10.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

Assessment

Assessment(s)
The learning in this lesson will be captured through a Quick Write at the end of the lesson. Students will answer the following prompt based on the evidence-based discussion of the text and the excerpt from the movie: • Watch the clip from the movie and, with your text of chapter one, explore which details the filmmaker chooses to emphasize. How does the depiction of these details in the clip enhance your

understanding? What is absent that you would want to see to understand more?

ⓘ This assessment will be evaluated using the Short Response Rubric.

High Performance Response(s)
A high performance response may include the following: • In the clip from the movie *Temple Grandin*, the filmmaker chooses to emphasize people's distrust in Grandin's design system and the challenges she faced going into the meatpacking industry. The clip also highlights Grandin's ability to argue for her design and prove to her superiors that her ideas are well thought out. Finally, the clip highlights Grandin's visual thinking, how she sees her system in her head. She knows the animals will be calmer in it: "I know my system will work," she says, "because I've been through it a thousand times in my head." This depiction enhanced my understanding by allowing me to see her designs in action and to see an actress speak the way Temple Grandin does. I would want to see how she came up with the idea, and what it looks like in her head. Maybe that's in the part of the movie we didn't watch.

Vocabulary

Vocabulary to provide directly (will not include extended instruction)
• accounts (n.) – reports or descriptions of an event   • mediums (n.) – the means by which something is communicated or expressed   • depiction (n.) – a representation in a drawing, painting, or another art form   • implications (n.) – conclusions that can be drawn from something, although they are not explicitly stated

Vocabulary to teach (may include direct word work and/or questions)
• None.

Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
Standards & Text: • Standards: RI.9-10.7, W.9-10.8 • Text: *Animals in Translation*, Chapter 1 **Learning Sequence:**	
1. Introduction of Lesson Agenda	1. 10%

2.	Homework Accountability	2.	15%
3.	*Temple Grandin* Film Analysis	3.	35%
4.	Quick Write	4.	15%
5.	Inquiry Question Development	5.	20%
6.	Closing	6.	5%

Materials

- Student copies of the **Exploring a Topic Tool** (refer to 9.3.1 Lesson 6)
- *Temple Grandin*. Dir. Mick Jackson. Perf. Claire Danes, Julia Ormond, David Strathairn. HBO, 2010. Film. (http://www.youtube.com/watch?v=0Ff9eW0vEj0)
- Copies of **the Book vs. Movie Details Tool** for each student
- Student copies of the **Short Response Rubric and Checklist** (refer to 9.3.1 Lesson 1)
- Student copies of the **Posing Inquiry Questions Handout** (to be used for homework) (refer to 9.3.1 Lesson 3)

Learning Sequence

How to Use the Learning Sequence	
Symbol	**Type of Text & Interpretation of the Symbol**
10%	**Percentage indicates the percentage of lesson time each activity should take.**
no symbol	Plain text indicates teacher action.
	Bold text indicates questions for the teacher to ask students.
	Italicized text indicates a vocabulary word.
▶	Indicates student action(s).
🗨	Indicates possible student response(s) to teacher questions.
ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Lesson Agenda   10%

Begin by reviewing the agenda and assessed standard for this lesson: RI.9-10.7. Remind students that they worked with this standard in unit 9.2.3 when they watched a video about Bernard Madoff's crime. Tell students they have also worked with this standard's literature counterpart, RL.9-10.7, when watching *Romeo and Juliet*.

Ask students to look at the language of the standard and respond to the following:

File: 9.3.1 Lesson 7 **Date:** 1/17/14 **Classroom Use:** Starting 1/2014

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Give one example of an account told in two different mediums.

> 🗨 *Romeo and Juliet* is a play that has been performed on the stage and made into a movie.

Inform students that in this lesson, they will be viewing an excerpt from a movie about Temple Grandin's life and analyzing this dramatic account, determining the different details that are emphasized in the movie as compared to the chapter from *Animals in Translation*. In addition, by watching the film excerpt, students may acquire a new perspective on central ideas and details emphasized in the text. Inform students that they will then work to further refine their inquiry questions. The lesson concludes with a Quick Write.

Activity 2: Homework Accountability   15%

Read aloud this sentence from the text excerpt assigned for homework: "Autistic people and animals are *seeing* a whole register of the visual world normal people can't, or don't" (p. 24).

Instruct students to form pairs to do a Turn-and-Talk about the following question before sharing out with the class.

What examples does Grandin use to illustrate the point that she makes in this excerpt?

> 🗨 Students responses may include the following:
>
> o Grandin describes an experiment that a psychologist from the University of Illinois conducted. Participants in the experiment were instructed to "count how many passes one team makes," (p. 24) when they watched a video of a basketball game. In the middle of the tape a "woman wearing a gorilla suit walks onto the screen", (p. 24). Amazingly, the people watching the video did not see her.
>
> o Grandin reports of a scarier study. She calls it scary because it involved the visual perception of commercial pilots. NASA conducted the experiment. In a flight simulator pilots followed several "routine landings." In some cases a "large commercial airplane" (p. 25) was actually parked on the very runway where they were supposed to land. The scary part of the experiment was the fact that "*One quarter of the pilots landed right on top of the airplane*" (p. 25).

Read aloud the final paragraph of the chapter:

> I hope this book will help regular people be a little less verbal and a little more visual. I've spent thirty years as an animal scientist, and I've spent my whole life as an autistic person. I hope what I've learned will help people start over again with animals (and maybe with autistic people, too), and begin to think about them in a different way.

I hope what I've learned will help people *see*. (p. 26)

Ask the students:

Why do you think the final word of the chapter, "*see*," appears in italics?

- 🗨 Students responses may include the following:

  - o Throughout the chapter, Grandin emphasizes the importance of seeing. She connects seeing to thinking because she is a visual thinker. So maybe she means "see" the ways that she "sees"—that is, that she will change the way people think to a way that she thinks.
  - o She also means "see" as in "understand."

How does Grandin further develop and refine her central idea in this passage?

- 🗨 Students responses may include the following:

  - o Grandin says that verbal thinkers often do not *see* small details. Grandin refines the idea that being a visual thinker has helped her understand animals, and she says she hopes her thinking will help other people see more clearly (25–26).

Instruct students to take out the Exploring a Topic Tool, which they should have completed for homework. Students will use this tool to guide their inquiry question development later in the lesson. For now, circulate to ensure everyone has completed this assignment.

Activity 3: *Temple Grandin* Film Analysis   35%

Introduce the Quick Write assessment (Watch the clip from the movie and, with your text of Chapter 1, explore which details the filmmaker chooses to emphasize. How does the depiction of these details in the clip enhance your understanding? What is absent that you would want to see to understand more?). Explain to students that this is the lesson assessment and the focus for today's reading.

- ▸ Students read the assessment and listen.

- ⓘ Display the Quick Write assessments for students to see.

- ⓘ If students are unfamiliar with the word *depiction*, tell them that in this context, it means, "a representation in a drawing, painting, or another art form."

- ⓘ There are a variety of possible film excerpts, interviews, and documentaries about Temple Grandin available online and elsewhere. Many of these will work equally well with this activity and

assessment. Review the film to ensure connections with central ideas and/or topics explored in Chapter 1 of *Animals in Translation*.

Before having students watch the excerpt from the film, provide them with context: The film *Temple Grandin* is a biographical drama that shows her challenges and successes. Explain to students the scene they will watch is related to what they just read.

Transition students to watching an excerpt from the movie *Temple Grandin.* Ask them to consider which details are emphasized in this medium and how they are depicted. Recommend that students take notes during the viewing of the film excerpt in order to have notes to compare with their analyses of Chapter 1 of *Animals in Translation*.

▸ Students watch the movie excerpt.

ⓘ If time allows, have students watch the clip one or two more times to ensure comprehension and to aid in deeper analysis.

Direct students to form small groups. Distribute the Book vs. Movie Details Tool and instruct groups to discuss the details that were emphasized in the movie and then compare those to the book. Instruct students to record their findings. Have students cite page numbers for details from the Grandin text.

Ask volunteers to share an example.

🗨 The excerpt begins with a group of people telling Grandin her idea is too expensive and will not work, but she begins to convince them with her arguments and the confidence she has about her design.

▸ Student groups work on the tool.

Lead a brief class discussion of group responses.

🗨 Students responses may include the following:

  o In the book, Grandin talks about her designs and why they succeed. In the movie, we actually get to see the designs.
  o In the book, she talks about how stress is bad for animals and in the movie, you see how the cows calm down.
  o In the book, Grandin says that she failed algebra because she could not visualize it. But when you look at her design you realize that she has an understanding of engineering in order to do her work.

o   The movie actually shows the design "in action." Actually seeing the design in the film helps conceptualize her work—something harder to do with the book's text. This is interesting since it enables the audience to *see*.

Activity 4: Quick Write   15%

Instruct students to respond briefly in writing to the following prompt:

Watch the clip from the movie and, with your text of Chapter 1, explore which details the filmmaker chooses to emphasize. How does the depiction of these details in the clip enhance your understanding? What is absent that you would want to see to understand more?

Remind students to use the Short Response Checklist and Rubric to guide their written responses.

ⓘ Display the prompt for students to see, or provide the prompt in hard copy.

▸ Students independently answer the prompt using evidence from the text.

🗨 See the High Performance Response at the beginning of this lesson.

Activity 5: Inquiry Question Development   20%

Inform students that they will now begin to develop inquiry questions based on their area of investigation in preparation for research. An inquiry question is a question that identifies things one needs to know about a topic and helps guide research and analysis. Explain to students that questions drive research because they serve as the fuel to search for information. Explain that if there is no question, research can be misdirected, unorganized, and fruitless. Remind students that inquiry questions should not be the type that can be answered with a yes or no answer since these do not fuel research.

Instruct students to take out the Exploring a Topic Tool they completed for homework and talk in pairs about the areas of investigation that they identified. In these pairs, students begin to develop inquiry questions related to their areas of investigation.

Explain to students that to guide their inquiry question development, they should ask themselves the following questions about their area of investigation:

How is it defined? Where did it originate? What is its history? What are its major aspects? What are its causes and implications? What other things is it connected to or associated with? What are its important places, things, people, or experts?

ⓘ If students are unfamiliar with the word *implications*, tell them that it means "conclusions that can be drawn from something, although they are not explicitly stated."

Explain to students that one example of an inquiry question would be: What is the history of autism? Instruct students to begin developing questions.

🗨 Student inquiry questions may include:

- o   How has animal intelligence been measured in the past?
- o   What types of things can animals learn, and what is instinct?
- o   What is the purpose of studying animal intelligence?

Activity 6: Closing   5%

Display and distribute the homework assignment. For homework, instruct students to continue developing inquiry questions for their areas of investigation and come up with five more possible inquiry questions, using the Posing Inquiry Questions Handout as a guide.

▸ Students follow along.

Homework

Continue developing inquiry questions for your areas of investigation, using the Posing Inquiry Questions Handout as a guide. Come up with five more possible inquiry questions.

Book vs. Movie Details Tool

Name:		Class:		Date:	

Animals in Translation	*Temple Grandin* Movie	Analysis of Detail

Model Book vs. Movie Details Tool

Name:		Class:		Date:	

Animals in Translation	*Temple Grandin* Movie	Analysis of Detail
In the book Grandin observes the animals in order to find solutions (p. 12).	The excerpt begins with Grandin presenting her solution to the problem of inefficiency in the meatpacking plant. Her superiors tell her the solution is too expensive and not worth their time.	Grandin explains that she knows her designs work because she has "been through it a thousand times in [her] head."
In the book, Grandin says, "The reason plants have adopted my design is that animals are much more willing to walk into it… so it's a lot more efficient" (p. 12).	In the movie, Grandin convinces the plant managers to listen to her by insisting her design is more efficient than what they have.	Here, we are seeing people act reluctantly and be proven wrong by Grandin's argument that her design will ultimately save them money.
"That's because autistic people think in pictures" (p. 10).	In the movie, we see (and hear from Temple) that she has been over her design a thousand times in her head, and when she says this, we see images of cattle going through a plant.	This is an example of a shared detail: in both the text and the movie, we are told (then shown) that Grandin thinks visually.

9.3.1	Lesson 8

Introduction

In this lesson, students will engage in a pre-search activity in order to begin gathering sources for further research in future lessons, as well as develop students' proficiency for posing general and specific questions. This process will also help students to validate their own interest in their proposed topic. Students will use the **Pre-Search Tool** to record relevant information about the sources they find (author's name, topic, source, location, publication date, and general content/key ideas). This activity will help to develop students' ability to find relevant sources on their own, as well as to navigate through a wide pool of potential research sources. This activity will also help students confirm that there is enough information available about their topic to warrant further research.

For an assessment, students will refine or rewrite their inquiry questions based on what they found today in order to help them further explore the topic; they will then explain their choice. For homework, students will continue with their pre-searches and find three more potential sources.

Standards

Assessed Standard(s)	
RI.9-10.1.a	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
	a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s).
Addressed Standard(s)	
RI.9-10.4	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).
L.9-10.4.a,c,d	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 9–10 reading and content*, choosing flexibly from a range of strategies.
	a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
	c. Consult general and specialized reference materials (e.g., dictionaries, glossaries,

| | thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology. |
| | d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary). |

Assessment

Assessment(s)

The learning in this lesson is captured through a series of brief responses to the following prompt.

Refine or rewrite your inquiry questions based on what you found today. Explain in 2–3 sentences what changes you have made to your question, and what about your sources led you to make the change. If you feel a change is unnecessary, write 2–3 brief sentences explaining how the sources you have found validate your initial question.

Before responding, students should consider the following questions:

- o Do these sources point your research in a different direction?
- o After reading through several potential sources, how could you refine your inquiry question to sharpen your research?
- o Do any of these sources make you curious about something else?

High Performance Response(s)

A high performance response may include the following:

Initial Question: What is the history of studying animal intelligence?

Revised Question: How has the definition and study of animal cognition changed over the course of history?

The sources I found, using my first inquiry question, made me realize that the "history of studying animal intelligence" is more specifically the history of the definition and study of animal "cognition" or thinking. Animal cognition was once believed to not exist, and only very recently have people begun to think more seriously about the way animals think. One source I found discussed how the ways we measure animal intelligence are still changing.

Vocabulary

Vocabulary to provide directly (will not include extended instruction)

validate (v.) – check or prove the accuracy of something

etymology (n.) – the study of the origin of words and the way in which their meanings have changed

throughout history
Vocabulary to teach (may include direct word work and/or questions)
None.

Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
Standards & Text: **Standards: RI.9-10.1.a, RI.9-10.4, L.9-10.4.a,c,d** **Learning Sequence:** 1. Introduction of Lesson Agenda 2. Homework Accountability 3. Inquiry Question Peer Feedback 4. Vocabulary Journal Introduction 5. Pre-Search 6. Assessment 7. Closing	 1. 5% 2. 10% 3. 15% 4. 15% 5. 40% 6. 10% 7. 5%

Materials

Copies of the **Vocabulary Journal Template** for each student

Copies of the **Pre-Search Tool and Model** for each student

Copies of the **Potential Sources Tool** for each student

Learning Sequence

How to Use the Learning Sequence	
Symbol	**Type of Text & Interpretation of the Symbol**
10%	**Percentage indicates the percentage of lesson time each activity should take.**
no symbol	Plain text indicates teacher action. **Bold text indicates questions for the teacher to ask students.** *Italicized text indicates a vocabulary word.*
▶	Indicates student action(s).
✎	Indicates possible student response(s) to teacher questions.

ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Lesson Agenda   5%

Begin by reviewing the agenda and the assessed standard for this lesson: RI. 9-10.1.a. Inform students that today they will be using the inquiry questions they developed in the previous lesson. They will begin the pre-search for sources and record relevant information on the Potential Sources Tool. For homework, students will continue with their pre-searches and find three more potential sources.

▶ Students look at the lesson agenda.

Activity 2: Homework Accountability   10%

Ask student volunteers to share out the inquiry questions they developed for homework. Instruct students that, when sharing, they should clarify the area of investigation to which the question relates.

▶ Student volunteers share their inquiry questions aloud.

🗨 Student responses may include the following:

Area of Investigation	Inquiry Question
Autism	What is the history of autism?
Meatpacking Industry	What are some current problems with the meatpacking industry, and what are people doing to help?
Animal Intelligence	What is the history of studying animal intelligence?

Activity 3: Inquiry Question Peer Feedback   15%

Once several students have completed a share out of their inquiry questions, ask students to work in pairs to discuss their inquiry questions in more detail. Explain to students that they should ask one another about their thought process, with questions such as:

Why do you want to know about this topic? How did you come up with this question? Will the answer to this question satisfy your curiosity?

Instruct students to use questions like this to help them gain an understanding of their classmate's curiosity and research goals. Then, if they see a more useful way to ask the question, or if they think there is another direction in which to take the research, they should offer that feedback. Inform students this is not a peer review or assessment but rather a chance for students to work with one another to construct meaningful inquiry questions before searching for sources.

▶ Students work in pairs to explain and refine their inquiry questions.

Activity 4: Vocabulary Journal Introduction   15%

Share with students that this research process exposes them to new vocabulary through the reading of a wide variety of academic texts. Instruct students to keep track of vocabulary learned by using a Vocabulary Journal. Students should also use the Vocabulary Journal to record their reflections on the strategies employed to learn the vocabulary.

▶ Students listen.

ⓘ Because the following lessons in this module are not close-reading lessons, the Vocabulary Journal will ensure the application of vocabulary strategies modeled thus far.

Explain to students that the vocabulary they track in the Vocabulary Journal should be words they come across in their searches that are proving to be an obstacle to understanding the text. Additionally, the words should fit into one of two categories. One category is words that are found across multiple texts, in a variety of classes; these are words that might appear in all of their content classes like science, math, English, and social studies. Examples are words like *plagiarism*, *relevant*, and *assess*. The second category of words is vocabulary that is specific to one content area or class. These are words like *behaviorism*, *ethologist*, and *operant conditioning*. Ask students to record any words that prove to be an obstacle and fit into one of the above categories in their Vocabulary Journal.

ⓘ Share with students the purpose of differentiating between these words—that one type of words are those they are likely to encounter often with texts as they proceed with the remainder of high school, college, and their civic life; the other are types of words that may be specific to the domain of their research. For example, *verify*, *metaphor*, and *complex* are words that they may see in their arts, science, and social studies texts; *cerebellum*, *psychosomatic*, and *neurological* are words they may encounter in a science article that would be a potential source related to their area of investigation.

▶ Students listen.

ⓘ Remind students that the volume of unknown words should not prove such an obstacle that the text is largely inaccessible. The Potential Sources Tool should vet for this type of issue.

Share with students the following strategies that can be employed to determine the meaning of unknown words or phrases:

Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

Verify the meaning of the word or phrase (by checking the inferred meaning in context or in a dictionary).

Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis, analytical). How do changes in prefixes and suffixes affect word meaning?

Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses) to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its *etymology***.**

Inform students that *etymology* can be an important part of learning vocabulary. *Etymology* is the study of the origin of words and the way in which their meanings have changed throughout history.

> ‣ Students listen.

ⓘ Consider displaying the strategies for students to see.

ⓘ Consider reviewing how to use reference materials (dictionaries, glossaries, thesauruses) to determine word meaning if students need more support.

ⓘ These strategies come directly from standard L.9-10.4. Consider drawing students' attention to their application of standard L.9-10.4.a,c,d by using context to make meaning of a word; consulting reference materials to clarify its precise meaning; verifying the preliminary determination of its meaning.

Instruct students on how to complete the Vocabulary Journal when it is assigned for homework in a lesson by explaining the following:

Describe where you encountered the word/phrase in the research and why it is proving problematic.

Discuss how you tried to figure out the meaning of the word/phrase.

Confirm the word's meaning as it is used in the research text by using a reference source (dictionary, encyclopedia, etc.).

> ‣ Students listen.

ⓘ Consider instructing students to use notebooks or additional paper for the Vocabulary Journal. The notebook or additional paper can be kept in the Research Portfolio throughout the research process.

Activity 5: Pre-Search   40%

Now that students have developed their inquiry questions and received peer feedback, instruct them to use one of these questions to guide preliminary research. Inform students that the nature of this lesson's pre-search is not to fully answer their inquiry questions, but to ensure there is enough source material to begin doing more in-depth research.

Ask students to also use this lesson's pre-search exercise to refine their inquiry questions even further before beginning more detailed research. Finally, inform students to use this pre-search to confirm their interest in the topic, as well as the direction in which their question leads them.

> ‣ Students listen.

Instruct students to use the Pre-Search Tool to record general information about the sources they find, including author's name, topic, source, location, publication date, and general content/key ideas. Explain to students that this process helps them keep track of their sources for later.

Instruct students to use the resources available to them (the Internet, library, librarian/media specialist, etc.) to begin independently searching for sources. Inform students that, at this point, they should not read closely and annotate the sources they find; instead, they should record general information on the Pre-Search Tool and read enough of the potential source to confirm that it is relevant. The students' goal should be to confirm that there is enough available information on this topic to warrant further research.

As they search, students should consider:

> **Do these sources point your research in a different direction?**
>
> **After reading through several potential sources, how could you refine your inquiry question to sharpen your research?**
>
> **Do any of these sources make you curious about something else?**

ⓘ Consider the school's resources and model a search for sources. Model a search for cattle and antibiotics. (In the absence of a computer in class, prepare a presentation in advance, or coordinate with the school's librarian/media specialist in advance to ensure computer access for students.)

Instruct students to record basic information about the sources that they identify in the Potential Sources Tool.

ⓘ Consider taking the students to the school library to use the physical and technological resources available to them there. Encourage students to discuss their pre-searches with a media specialist or librarian.

Pause for questions and clarification. Circulate and assist students as they conduct their pre-search.

ⓘ **Differentiation Consideration:** If students are not yet prepared to begin searching independently, or if they would benefit from working in pairs, consider organizing students by topic into small groups of two to four. Students could work alongside one another and share with the group the sources they find individually. This helps students articulate general information about the source as they explain it to the rest of the group.

▸ Students use the resources available to them to begin independently searching for sources, recording what they find on the Pre-Search Tool.

Activity 6: Assessment   10%

Once students have found several sources, ask them to reconsider their initial inquiry questions. Have students consider the following questions:

Do these sources point your research in a different direction?

After reading through several potential sources, how could you refine your inquiry question to sharpen your research?

Do any of these sources make you curious about something else?

For an assessment, instruct students to respond to the following prompt:

Refine or rewrite your inquiry questions based on what you found today. Explain in 2–3 sentences what changes you have made to your question, and what about your sources led you to make the change. If you feel a change is unnecessary, write 2–3 brief sentences explaining how the sources you have found *validate* your initial question.

Inform students that *validate* means to prove the accuracy or worthiness of something.

ⓘ Display the prompt for students to see, or provide the prompt in hard copy.

▸ Students independently answer the prompt using evidence from the text.

🗨 See the High Performance Response at the beginning of the lesson.

ⓘ Assess students' inquiry questions for clarity and their potential to result in meaningful research. Assess students' 2–3 sentence explanations on their thoughtfulness and as evidence that students engaged with the material they found during their pre-search.

Activity 7: Closing   5%

Display and distribute the homework assignment. For homework, instruct students to continue with their pre-searches. Ask students to find three more potential sources and record the same information they recorded today in class: author's name, topic, source, location, publication date, and general content/key ideas.

▸ Students follow along.

Homework

Continue with your pre-search. Find three more potential sources and record the same information you recorded today in class: author's name, topic, source, location, publication date, and general content/key ideas.

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Vocabulary Journal Template

Name:		Class:		Date:	

Word	
Describe where you encountered the word/phrase in the research and why it is problematic.	
Discuss how you tried to figure out the meaning of the word/phrase in context.	
Confirm the word's meaning as it is used in the research text by using a reference source (dictionary, encyclopedia, etc.).	
Word	
Describe where you encountered the word/phrase in the researchand why it is problematic.	
Discuss how you tried to figure out the meaning of the word/phrase in context.	
Confirm the word's meaning as it is used in the research text by using a reference source (dictionary, encyclopedia, etc.).	

Pre-Search Tool

Name:		Class:		Date:	

Source Notes	How does this source connect to your potential area of investigation?
Source # 1 Title: Location: Author:	
Source # 2 Title: Location: Author:	
Source # 3 Title: Location: Author:	

Is there enough source information to research this potential area of investigation?

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Model Pre-Search Tool

Name:		Class:		Date:	

Source Notes	How does this source connect to your potential area of investigation?
Source # 1 Title: "The History of Autism" Location: http://www.english.certec.lth.se/autism/kunskap_e.html Author: No author.	This source explains the history of how autism was diagnosed and what the outlook for people with autism has been over the last several decades.
Source # 2 Title: "Autism at 70, From Kanner to DSM-5" Location: http://www.autismspeaks.org/science/science-news/autism-70-%E2%80%93-kanner-dsm-5 Author: No author.	This source provides a timeline of the history of autism and how it was diagnosed.
Source # 3 Title: "Some Key Dates in Autism History" Location: http://www.washingtonpost.com/wp-dyn/content/article/2008/06/27/AR2008062703062.html Author: Brittney Johnson	This source provides another timeline of key dates in the history of autism.

Is there enough source information to research this potential area of investigation?

There is enough source information to research the history of autism, but I need to redefine what I mean by "history of autism."

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Name .... **Topic** ....

Area of Investigation ....

SOURCE	Title:		Location:	
#	Author:		Text Type:	Publication Date:

General Content / Key Ideas / Personal Comments:

	Connection to Inquiry Paths:

Credibility: [ ] High [ ] Medium [ ] Low | Relevance/Richness: [ ] High [ ] Medium [ ] Low | Accessibility/Interest: [ ] High [ ] Medium [ ] Low

SOURCE	Title:		Location:	
#	Author:		Text Type:	Publication Date:

General Content / Key Ideas / Personal Comments:

	Connection to Inquiry Paths:

Credibility: [ ] High [ ] Medium [ ] Low | Relevance/Richness: [ ] High [ ] Medium [ ] Low | Accessibility/Interest: [ ] High [ ] Medium [ ] Low

SOURCE	Title:		Location:	
#	Author:		Text Type:	Publication Date:

General Content / Key Ideas / Personal Comments:

	Connection to Inquiry Paths:

Credibility: [ ] High [ ] Medium [ ] Low | Relevance/Richness: [ ] High [ ] Medium [ ] Low | Accessibility/Interest: [ ] High [ ] Medium [ ] Low

POTENTIAL SOURCES

Name Student Sample   **Topic** Animal Intelligence

Area of Investigation How does animal intelligence compare to human intelligence?

SOURCE	Title: Animal Minds: Minds of Their Own	Location: National Geographic Magazine Online	
#	Author: Virginia Morell	Text Type: Article	Publication Date: March 2008

General Content / Key Ideas / Personal Comments: Connection to Inquiry Paths:

The article is relevant because it is about researching animals' intelligence, which is my focus inquiry question. Also, it seems credible because at the beginning the writer cites a study conducted by a Harvard graduate, which shows the writer is looking at research to compose the article.

Credibility: [ ] High [ ] Medium [ ] Low   Relevance/Richness: [ ] High [ ] Medium [ ] Low   Accessibility/Interest: [ ] High [ ] Medium [ ] Low

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SOURCE	Title: The Brains of the Animal Kingdom	Location: Wall Street Journal Online	
#	Author: Waal	Text Type: Article	Publication Date: 2013

General Content / Key Ideas / Personal Comments: Connection to Inquiry Paths:

This article is relevant because it is about measuring animal intelligence using different kinds of experiments that showcase animal intelligence. This article seems credible because it comes from a notable news source (Wall Street Journal) and the author is a professor and has written a book on the topic.

Credibility: [ ] High [ ] Medium [ ] Low   Relevance/Richness: [ ] High [ ] Medium [ ] Low   Accessibility/Interest: [ ] High [ ] Medium [ ] Low

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SOURCE	Title: Think You're Smarter Than Animals? Maybe Not	Location: New York Times Online	
#	Author: Alexandra Horowitze and Ammon Shea	Text Type: Article	Publication Date: 8/20/11

General Content / Key Ideas / Personal Comments: Connection to Inquiry Paths:

This article seems relevant because it has several studies on animal intelligence where animals show how smart they truly are. It also begins to compare animal and human intelligence. The article seems credible because it comes from a notable news source (New York Times) and the authors have written books on animal intelligence.

Credibility: [ ] High [ ] Medium [ ] Low   Relevance/Richness: [ ] High [ ] Medium [ ] Low   Accessibility/Interest: [ ] High [ ] Medium [ ] Low

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POTENTIAL SOURCES

9.3.1	Lesson 9

Introduction

In this lesson, students will engage in several discussions to further clarify both their understanding of the Grandin text, as well as their potential areas of investigation. Students will first participate in a fishbowl discussion about their areas of investigation, dialoguing with their peers about the pre-search and its effect on their understanding of an area of investigation. Students will then engage in a short discussion in pairs or small groups about a central idea in the Grandin text and how it is developed and refined over the course of the chapter. For assessment, students will then individually create an evidence-based claim about the development and refinement of a central idea in the chapter. For homework, students will review the Grandin text and their annotations—as well as their notes from today's fishbowl discussion—in preparation for the End-of-Unit Assessment. Additionally, students will review the sources they found in the previous lesson and use them to solidify their area of investigation in preparation for the End-of-Unit Assessment.

Standards

Assessed Standard(s)	
RI.9-10.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
Addressed Standard(s)	
W.9-10.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
SL.9-10.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

Assessment

Assessment(s)
The learning in this lesson will be captured through a Quick Write at the end of the lesson. Students will answer the following prompt citing evidence from the text.   • Students will write 1–2 paragraphs in which they make an evidence-based claim about Grandin's development and refinement of a central idea in the text.   ⓘ Assess this response using the Short Response Rubric.
High Performance Response(s)
A high performance response may include the following: • Animal stress in feedlots and meatpacking houses is inefficient and costs money, and visual thinkers, like Temple Grandin, can help lower stress, and therefore help the meatpacking industry make money. Grandin says that, "stressed animals gain less weight, which means less meat to sell." She also points out that animals that are stressed will sometimes not walk through the lot efficiently, and an entire operation can slow down. Grandin says that often small visual details that most people do not notice are making the animals stressed, and she can notice those details: "When I got to the feedlot, it took me about ten minutes to figure out the problem…to me it was obvious: the alley was too dark." Once she fixes the subtle visual problems, the animals become less stressed, things run more efficiently, and a business can run more effectively."

Vocabulary

Vocabulary to provide directly (will not include extended instruction)
• relevant (adj.) – closely connected or appropriate to the matter at hand
Vocabulary to teach (may include direct word work and/or questions)
• None.*

*Students should be adding to their Vocabulary Journal as they conduct searches and evaluate sources for credibility and relevance. See Lesson 8, Activity 4 for more information.

Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
Standards & Text:	
• Standards: RI.9-10.2, W.9-10.7, SL.9-10.1	
• Text: Grandin, *Animals in Translation*, Chapter 1	
Learning Sequence:	
1. Introduction of Lesson Agenda	1. 5%
2. Homework Accountability	2. 15%
3. Fishbowl Discussion: Areas of Investigation	3. 55%
4. Quick Write	4. 20%
5. Closing	5. 5%

Materials

- Student copies of the **Short Response Rubric and Short Response Checklist** (refer to 9.3.1 Lesson 1)

Learning Sequence

How to Use the Learning Sequence	
Symbol	**Type of Text & Interpretation of the Symbol**
10%	**Percentage indicates the percentage of lesson time each activity should take.**
no symbol	Plain text indicates teacher action.
	Bold text indicates questions for the teacher to ask students.
	Italicized text indicates a vocabulary word.
▶	Indicates student action(s).
●	Indicates possible student response(s) to teacher questions.
ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Lesson Agenda   5%

Begin by reviewing the agenda and the assessed standard for this lesson: RI.9-10.2. Inform students that today's class involves two discussions: one larger discussion to further investigate their potential areas of investigation, and one smaller discussion to explore the development of a central idea in Grandin's first chapter.

▶ Students listen.

Activity 2: Homework Accountability   15%

Ask students to work in pairs and share the potential sources they found for homework. Instruct students to first articulate their question and then briefly explain how each source relates to that question.

▶ Student pairs share the potential sources they found for homework. The students' responses vary based on the individual research they conducted.

Now ask students to discuss in pairs how this source is *relevant* to that question. Explain to students that *relevant* means closely connected to their question.

🗨 Student responses vary based on the research each conducted. Possible student responses may include:

   o My question was, "How has the definition and study of animal cognition changed over the course of history?" The source I found is related to this question because it discusses how people have measured animal intelligence over the years. It also discusses what philosophers used to say about animal intelligence, including that it does not exist.

Ask students to share out any word they recorded in their vocabulary journal, including how they determined the meaning.

🗨 Student responses vary based on the research each conducted. Possible student responses may include:

   o The source I found contained the phrase, "While the study of animal cognition is largely an empirical endeavor, the practice of science in this area relies on theoretical arguments and assumptions." I did not know what *empirical* meant, but I guessed it was different from "theoretical arguments and assumptions." If an argument or assumption is theoretical, that means it has not been proven. So I think *empirical* might mean something that can be proven. I looked up the word on dictionary.com, and learned it means "provable or verifiable by experience or experiment."

Activity 3: Fishbowl Discussion: Areas of Investigation   55%

In order to further explore their potential areas of investigation, instruct students to engage in a fishbowl discussion. Remind students that they have had this type of discussion in 9.2.3, Lesson 13. Explain to students that in this lesson, they will continue the work of collaborative discussion outlined in

SL.9-10.1, to which students were previously introduced. Remind students these discussion strategies have been taught in previous modules.

ⓘ Consider reminding students of the skills inherent in the sub-standards of Standard SL.9-10.1, to which students were previously introduced.

Break the class into two equal groups and form two circles—one inner and one outer. Explain to students that the inner circle serves as the discussion group, while the outer group listens and takes notes on the inner group's discussion. After 10 minutes, the outer group provides feedback to the inner group about their discussion. After that feedback has been provided, the groups switch places, and the process repeats.

ⓘ Remind students that it is important to remain respectful during discussion. Respectful disagreement is okay, as long as the discussion remains focused and students articulate their disagreements collegiately.

▸ Students break into two groups, form two circles, and listen.

Instruct the outer group to take notes on the inner group's discussion, especially when something is unclear or when something engaging happens. Once students have formed two groups and arranged themselves into a fishbowl, pose the following question to the inside circle:

What did your pre-searches reveal about your areas of investigation?

ⓘ Student answers may vary depending on their areas of investigation and research conducted. The task at-hand is not to have students explain to the class how their pre-search affected their understanding of an area of investigation. Rather, it is for students to engage in a discussion about a range of possible areas of investigation and hear their peers' thoughts.

Encourage students to ask questions about their peers' areas of investigation and presearches. Possible questions might include:

How does this area of investigation interest you?

How did a particular source you found during your pre-search change your thinking about your area of investigation?

For example, students may ask: What about animal intelligence interests you? How has the source from *Scientific American* shaped your thinking so far about animal intelligence? What are contrasting points of view?

▸ Students discuss.

After 10 minutes, instruct students in the outer circle to share at least one inner circle student's point, question, or response as well as something new they learned as a result of the discussion. Ask students

to note the strong points of the discussion and where it could have been stronger. Inform students in the outer circle that they have five minutes to share.

▸ Students in the outer circle share one point, question, or response as well as one thing they learned as a result of the discussion. Students in the inner circle listen.

Instruct students in the inner circle to move to the outer circle and the students in the outer circle to move to the inner circle. Repeat the discussion process.

Activity 4: Quick Write   20%

Instruct students to respond briefly in writing to the following prompt:

Make an evidence-based claim about the development and refinement of a central idea in the Grandin chapter.

Remind students to use the Short Response Checklist and Short Response Rubric to guide their written responses.

ⓘ Display the prompt for students to see or provide the prompt in hard copy.

▸ Students independently answer the prompt using evidence from the text.

🗨 See the High Performance Response at the beginning of this lesson.

Activity 5: Closing   5%

Display and distribute the homework assignment. For homework, instruct students to review the Grandin text and their annotations—as well as their notes from today's fishbowl discussion—in preparation for the End-of-Unit Assessment. Additionally, instruct students to review the sources they found in the previous lesson and use them to solidify their area of investigation in preparation for the End-of-Unit Assessment.

▸ Students follow along.

Homework

Review the Grandin text and annotations—as well as your notes from today's fishbowl discussion—in preparation for the End-of-Unit Assessment. Additionally, review the sources you found in the previous lesson and use them to solidify your area of investigation in preparation for the End-of-Unit Assessment.

9.3.1	Lesson 10

Introduction

In this lesson, the End-of-Unit Assessment, students will complete a two-part assessment. First, students will synthesize and compose a multi-paragraph response tracing the development and refinement of a central idea from Chapter 1 of *Animals in Translation*. In part two, students will write about two or three areas of investigation that emerged from *Animals in Translation*, explaining how and from where the areas emerged.

This lesson asks students to apply standards RI.9-10.2 and W.9-10.4 as they examine the development of a central idea in the text itself. This lesson also assesses students' comprehension of the research process that has been introduced in this unit. Students will use their areas of investigation to guide their research in the following unit. For homework, students will continue to read sources found during pre-searches and identify, record, and use vocabulary strategies to define unknown words in their Vocabulary Journal.

Standards

Assessed Standard(s)	
RI.9-10.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
W.9-10.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
W.9-10.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.
Addressed Standard(s)	
None.	

1

Assessment

Assessment(s)

The assessment in this lesson is the End-of-Unit Assessment. This assessment will encompass *Animals in Translation*, Chapter 1 as well as the research component introduced in this unit.

- Part 1: How does Grandin develop and refine a central idea in the text? In a response of 3–4 paragraphs, identify a central idea from Chapter 1 of *Animals in Translation* and trace its development and refinement in the text. Use at least four details from the text in your response.

ⓘ For Part 1, use the Text Analysis Rubric and Checklist to assess student responses.

- Part 2: Articulate in writing 2–3 areas of investigation and describe how and where each area emerged from the Grandin text. Consult the Topic Tracking Tool and Exploring a Topic Tool as well as notes from the Grandin text.

ⓘ For Part 2, use the Area Evaluation Checklist to assess student responses.

High Performance Response(s)

A high performance response may include the following:

Part 1 response:

- A central idea from Chapter 1 of *Animals in Translation* is Grandin's claim that her autism provided her with a unique perspective and insight into animal behavior: "Autism made school and social life hard but it made animals easy" (p. 1). Grandin develops this idea throughout the chapter in several ways. First, she explains her own background, her autism as well as her experience and love for animals: "Animals saved me" (p. 4). Grandin also studied psychology and used principles of behaviorism and ethology to discover what has escaped other animal researchers. Grandin further develops this central idea through her clarification of what it means to be a visual thinker: she "actually think[s] in pictures" (p. 17). Grandin refines and supports her claim by illustrating her success in the meatpacking industry.

- Temple Grandin says plainly, "I'm different from every other professional who works with animals" (p. 6). Grandin is different because she is autistic, but she has used autism to her advantage: "Autism is kind of a way station on the road from animals to human" (p. 6). She explains that she has a "special connection to animals" and that she is now able to comprehend the emotionally disturbed horses that resided at her former boarding school because she understands "the way animals think" (p. 1).

- In this chapter, Grandin provides some background in animal psychology focusing on behaviorial and ethology theories. Grandin writes that behaviorists "made a big mistake declaring the brain off-limits" (p. 11). When behaviorists, as well as ethologists, ruled out study of the brain, they focused solely on environment. Both stressed that "anthropomorphizing an animal was wrong" (p. 14).

Grandin noticed that she had a lot of problems that did not come from her environment and was suspicious of this way of thinking. Her idea that it is important not to think of an animal as a human but to "think about the animal's point of view" (p. 15) was central to her understanding of animal behavior.

- Grandin was easily able to see from an animal's point of view because she is a visual thinker: "During my thinking process I have no words in my head at all, just pictures" (p. 17). Her natural inclinations toward visual thinking lead her to try to process animal thinking through a completely visual lens: "Since I was a visual thinker I assumed cows were, too. The difference was I happened to be right" (p. 18). She notes that not everyone is a visual thinker, and most people without autism have a tendency to overlook or not even register the visual. Grandin's visual thinking is a key point that underscores her central idea, and her success in the meatpacking industry is evidence that her claim has merit.

- Grandin writes about her ability to see from an animal's perspective, but she has had practical success as well: "Half the cattle in the United States and Canada are handled in human slaughter systems I've designed" (p. 7). She continues to explain her success in the field characterized by her numerous accomplishments, including "over three hundred scientific papers" published. This success clearly demonstrates that Grandin's claim is well supported and she truly does have a unique perspective on animal behavior because of her autism.

Part 2 response:

(Topic) Areas of Investigation

- (Animal Intelligence) Area of Investigation: How does animal intelligence compare to human intelligence?

  o One area of investigation from *Animals in Translation* is: How does animal intelligence compare to human intelligence? This area of investigation came from page 8 of *Animals in Translation*: "Animal genius is invisible to the naked eye." Grandin writes a lot about animal intelligence, but it would be fascinating to know more about smart animals. Also it would be interesting to understand how scientists know when an animal is intelligent and how animal intelligence compares to human intelligence. If animal genius is hard to see then there may be interesting ways that researchers have developed to identify animal intelligence and compare it with human intelligence.

- (Autism) Area of Investigation: What is the history of the diagnosis and treatment of autism?

  o What is the history of the diagnosis and treatment of autism? What have people called it in the past, and how have they worked with children diagnosed with autism? This area of investigation came from *Animals in Translation*, as Grandin discusses many of her own self-developed treatments that helped her cope with the disorder. For example, Grandin discusses

her instinct to work with animals and how it helped her. She also describes her "squeeze machine," which many people thought was crazy at the time but ended up being very useful in the treatment of autism.

- (Meatpacking Industry) Area of Investigation: What are some current problems with the meatpacking industry, and what are people doing to help?

    o The final area of investigation from *Animals in Translation* is: What are some current problems in the meatpacking industry, and what are people doing to help? This came from Grandin's discussion of the inefficiency she witnessed in the meatpacking industry and the accidental cruelty toward animals. Grandin has helped many companies in the meatpacking industry become "a lot more efficient" and more respectful toward animals by reducing environmental stresses and the need for prods. However, it is still worth thinking about what more could be done, and if anyone is as actively involved as Grandin in trying to find solutions to problems in the meat industry.

- ⓘ These areas of investigation should be kept after assessment, as they will be redistributed to students in 9.3.2, Lesson 1.

Vocabulary

Vocabulary to provide directly (will not include extended instruction)
• None.*
Vocabulary to teach (may include direct word work and/or questions)
• None.*

*Because this is not a close reading or a research lesson, there is no specified vocabulary. However, in the process of returning to the text, students may uncover unfamiliar words. Teachers can guide students to make meaning of these words by following the protocols described in 1E of this document http://www.engageny.org/sites/default/files/resource/attachments/9-12_ela_prefatory_material.pdf.

File: 9.3.1 Lesson 10 **Date:** 1/17/14 **Classroom Use:** Starting 1/2014

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Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
Standards & Text:	
• Standards: RI.9-10.2, W.9-10.4, W.9-10.9	
• Text: *Animals in Translation*, Chapter 1	
Learning Sequence:	
1. Introduction of Lesson Agenda	1. 5%
2. Homework Accountability	2. 10%
3. End-of-Unit Assessment Part 1: *Animals in Translation*	3. 50%
4. End-of-Unit Assessment Part 2: Areas of Investigation	4. 30%
5. Closing	5. 5%

Materials

• Copies of the **End-of-Unit Assessment** for each student

• Copies of the **Text Analysis Rubric and Checklist** for each student

• Student copies of the **Topic Tracking Tool** (refer to 9.3.1 Lesson 2)

• Student copies of the **Exploring a Topic Tool** (refer to 9.3.1 Lesson 6)

• Copies of the **Area Evaluation Checklist and Model** for each student

Learning Sequence

How to Use the Learning Sequence	
Symbol	**Type of Text & Interpretation of the Symbol**
10%	**Percentage indicates the percentage of lesson time each activity should take.**
no symbol	Plain text indicates teacher action.
	Bold text indicates text dependent questions.
	Italicized text indicates a vocabulary word.
▶	Indicates student action(s).
🗨	Indicates possible student response(s) to teacher questions.
ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Lesson Agenda   5%

Begin by introducing the lesson agenda and assessed standards for this lesson: RI.9-10.2, W.9-10.4 and W.9-10.9. Inform students they will be completing a two-part End-of-Unit Assessment: a multi-paragraph response analyzing the development and refinement of a central idea in *Animals in Translation* as well as an analysis of 2–3 areas of investigation that have emerged from *Animals in Translation*.

▸   Students follow along and read the agenda.

Activity 2: Homework Accountability   10%

Instruct students to form pairs and do a Turn-and-Talk to discuss their review of the Grandin text and their annotations—as well as their notes from the previous lesson's fishbowl discussion—in preparation for the End-of-Unit Assessment.

▸   Students form pairs and discuss their review of the Grandin text.

ⓘ   Students will be held accountable for the second part of the previous lesson's homework—to look over their sources and solidify their area of investigation—when they articulate their area of investigation in Activity 4.

Activity 3: End-of-Unit Assessment Part 1: *Animals in Translation*   50%

Display and introduce the End-of-Unit Assessment writing prompt:

How does Grandin develop and refine a central idea in the text? In a response of 3–4 paragraphs, identify a central idea from Chapter 1 of *Animals in Translation* and trace its development and refinement in the text. Use at least four details from the text in your response.

Ask students if they have remaining questions about the assessment prompt.

▸   Students examine the End-of-Unit Assessment prompt and ask remaining questions.

Remind students to use the Text Analysis Rubric to guide their written response.

Distribute and review the Text Analysis Rubric. Remind students to revisit the rubric once they are finished with the assessment to ensure they have fulfilled all the criteria.

▸   Students review the Text Analysis Rubric.

Instruct students to compose a multi-paragraph response to the writing prompt. Remind students as they write to refer to the notes, tools, and annotated text from the previous lessons.

▸ Students independently compose their multi-paragraph response.

🗨 See the High Performance Response at the beginning of this lesson.

Activity 4: End-of-Unit Assessment Part 2: Areas of Investigation   30%

Display and introduce the second portion of the End-of-Unit Assessment:

Articulate in writing 2–3 areas of investigation and describe how and where each area emerged from the Grandin text. Consult the Topic Tracking Tool and Exploring a Topic Tool as well as notes from the Grandin text.

Ask students if they have remaining questions about the assessment prompt.

▸ Students examine the End-of-Unit Assessment prompt and ask remaining questions.

Inform students that they may use their Tracking Topics Tool, Exploring a Topic Tool, and notes to assist them with composing this portion of the End-of-Unit Assessment. Students should use their notes from the Grandin text to describe how the area of investigation emerged from the text. Remind students that they already have all the information needed to answer this prompt; reaching back to these tools helps support students in their synthesis of this information.

▸ Students listen.

Distribute the Area Evaluation Checklist to students. Inform students that as they articulate their areas of investigation, they should use this checklist as a reference to ensure their areas are sufficient in terms of coherence, scope, relevance, and interest. Students should consult this checklist as they respond to the prompt but understand there is no need to fill it out.

ⓘ **Differentiation Consideration:** For further support, consider having students fill in the Area Evaluation Checklist independently, using their Tracking Topics Tool, Exploring a Topic Tool, and notes to assist them. When students have completed the Area Evaluation Checklist, instruct them to begin working directly on the prompt, translating the information compiled in the checklist into a coherent response to the prompt.

▸ Students independently write the second part of the End-of-Unit Assessment.

🗨 See the High Performance Response at the beginning of this lesson.

ⓘ These areas of investigation should be kept after assessment, as they will be redistributed to students in 9.3.2, Lesson 1.

Activity 5: Closing   5%

Display and distribute the homework assignment. For homework, instruct students to continue to read the sources they found during their pre-searches and identify, record, and define unknown vocabulary using their Vocabulary Journals. Ask students to check the definitions for at least five unknown vocabulary words. Remind students to be prepared to discuss this vocabulary and the definitions they found for these words in the following lesson.

ⓘ The Vocabulary Journal is introduced in 9.3.1 Lesson 8.

▸ Students follow along.

Homework

Continue to read the sources you found during your pre-searches and identify, record, and define unknown vocabulary using your Vocabulary Journal. Check the definitions of at least five unknown vocabulary words. Be prepared to discuss these words and their definitions in the following lesson.

End-of-Unit Assessment (9.3.1 Lesson 10)

Part 1: Text-Based Response

Your Task: Rely on your close reading of *Animals in Translation* to write a well-crafted multi-paragraph response to the following prompt.

How does Grandin develop and refine a central idea in the text? In a response of 3–4 paragraphs, identify a central idea from Chapter 1 of Animals in Translation and trace its development and refinement in the text. Use at least four details from the text in your response.

Your writing will be assessed using the Text Analysis Rubric.

Guidelines:

Be sure to:

- Closely read the prompt
- Respond directly to all parts of the prompt
- Paraphrase, quote, and reference relevant evidence to support your analysis
- Organize your ideas in a cohesive and coherent manner
- Use precise language appropriate for your task
- Follow the conventions of standard written English

CCLS: RI.9-10.2; W.9-10.4

Commentary on the Task:

This task measures RI.9-10.2 because it demands that students:

- o Determine a central idea of a text and analyze its development over the course of the text
- o Analyze how a central idea emerges and is shaped and refined by specific details

This task measures W.9-10.4 because it demands that students:

- o Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

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End-of-Unit Assessment (9.3.1 Lesson 10)

Part 2: Articulating Areas of Investigation

Your Task: Rely on your Topic Tracking Tool and Exploring a Topic Tool along with your notes from *Animals in Translation* to write a well-crafted multi-paragraph response to the following prompt.

> *Articulate in writing 2–3 areas of investigation and describe how and where each area emerged from the Grandin text. Consult the Topic Tracking Tool and Exploring a Topic Tool as well as notes from the Grandin text.*

Your writing will be assessed using the Area Evaluation Checklist.

Guidelines:

Be sure to:

- Closely read the prompt
- Respond directly to all parts of the prompt
- Paraphrase, quote, and reference relevant evidence to support your analysis
- Organize your ideas in a cohesive and coherent manner
- Use precise language appropriate for your task
- Follow the conventions of standard written English

CCLS: W.9-10.4, W.9-10.9

Commentary on the Task:

This task measures W.9-10.9 because it demands that students:

- o Draw evidence from informational texts to support analysis, reflection, and research.

This task measures W.9-10.4 because it demands that students:

- o Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

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Text Analysis Rubric   _____/16

Criteria	4 – Responses at this Level:	3 – Responses at this Level:	2 – Responses at this Level:	1 – Responses at this Level:
Content and Analysis: The extent to which the response conveys complex ideas and information clearly and accurately in order to respond to the task and support an analysis of the text. (W.9-10.2, W.9-10.9, R.9-10.2, R.9-10.5)	Introduce a well-reasoned claim regarding the development of a central idea. Demonstrate a thoughtful analysis of the author's use of specific details to shape and refine the central idea. and/or Demonstrate a thoughtful analysis of how the structure of texts, including how specific sentences, paragraphs, and larger portions of the text relate to each other and the whole.	Introduce a clear and focused claim regarding the development of a central idea. Demonstrate an appropriate analysis of the author's use of specific details to shape and refine the central idea. and/or Demonstrate an appropriate analysis of how the structure of texts, including how specific sentences, paragraphs, and larger portions of the text relate to each other and the whole.	Introduce a claim regarding the development of a central idea. Demonstrate a superficial and/or mostly literal analysis of the author's use of specific details to shape and refine the central idea. and/or Demonstrate a superficial and/or mostly literal analysis of how the structure of texts, including how specific sentences, paragraphs, and larger portions of the text relate to each other and the whole.	Introduce a confused or incomplete claim. and/or Demonstrate a minimal analysis of the author's use of details to shape and refine the central idea and/or Demonstrate a minimal analysis of how the structure of texts, including how specific sentences, paragraphs, and larger portions of the text relate to each other and the whole.
Command of Evidence: The extent to which the response presents evidence from the provided text to support analysis. (W.9-10.2.a, W.9-10.9)	Present ideas clearly and consistently, making effective use of specific and relevant evidence to support analysis.	Present ideas sufficiently, making adequate use of relevant evidence to support analysis.	Present ideas inconsistently, inadequately, and/or inaccurately in an attempt to support analysis, making use of some evidence that may be irrelevant.	Present little or no evidence from the text.
Coherence, Organization, and Style: The extent to which the response logically organizes complex ideas, concepts, and information using formal style and precise language. (W.9-10.2.b, e; W.9-10.9)	Exhibit logical organization of ideas and information to create a cohesive and coherent response. Establish and maintain a formal style, using precise language and sound structure.	Exhibit acceptable organization of ideas and information to create a coherent response. Establish and maintain a formal style, using appropriate language and structure.	Exhibit inconsistent organization of ideas and information, failing to create a coherent response. Lack a formal style, using language that is basic, inappropriate, or imprecise.	Exhibit little organization of ideas and information. Use language that is predominantly incoherent, inappropriate, or copied directly from the task or text. Are minimal, making assessment unreliable.
Control of Conventions: The extent to which the response demonstrates command of conventions of standard English grammar, usage, capitalization, punctuation, and spelling. (L.9-10.1, L.9-10.2)	Demonstrate control of the conventions with infrequent errors.	Demonstrate partial control of conventions with occasional errors that do not hinder comprehension.	Demonstrate emerging control of conventions with some errors that hinder comprehension.	Demonstrate a lack of control of conventions with frequent errors that make comprehension difficult. Are minimal, making assessment of conventions unreliable.

- A response that is a personal response and makes little or no reference to the task or text can be scored no higher than a 1.
- A response that is totally copied from the text with no original writing must be given a 0.
- A response that is totally unrelated to the task, illegible, incoherent, blank, or unrecognizable as English must be scored as a 0.

Text Analysis Checklist

Assessed Standard: _____

	Does my writing…	✔
Content and Analysis	Introduce a well-reasoned claim regarding the development of a central idea?	☐
	Demonstrate a thoughtful analysis of the author's use of specific details to shape and refine the central idea? and/or Demonstrate a thoughtful analysis of how the structure of texts, including how specific sentences, paragraphs, and larger portions of the text relate to each other and the whole?	☐
Command and Evidence	Present ideas clearly and consistently, making effective use of specific and relevant evidence to support analysis?	☐
Coherence, Organization, and Style	Exhibit logical organization of ideas and information to create a cohesive and coherent response?	☐
	Establish and maintain a formal style, using precise language and sound structure?	☐
Control of Conventions	Demonstrate control of the conventions with infrequent errors?	☐

Name... Area of Inv.. Date..................

AREA EVALUATION CHECKLIST	✓	COMMENTS
I. COHERENCE OF AREA *What is the area of investigation?*	The researcher can speak and write about the Area of Investigation in a way that makes sense to others and is clearly understood.	☐	....
II. SCOPE OF AREA *What do I need to know to gain an understanding of the area of investigation?*	The questions necessary to investigate for gaining an understanding require more than a quick review of easily accessed sources. The questions are reasonable enough so that the researcher is likely to find credible sources that address the issue in the time allotted for research.	☐	
III. RELEVANCE OF AREA *How is this Area of Investigation related to a larger topic?*	The Area of Investigation is relevant to the larger topic.	☐	
IV. INTEREST IN AREA *Why are you interested in this Area of Investigation?*	The researcher is able to communicate genuine interest in the Area of Investigation. Gaining an understanding of the area would be valuable for the student.	☐	....

In one or two sentences express the potential area of investigation in the form of a problem or overarching question:

....

....

....

Name Sample .... **Area of Inv.** Animal Intelligence .... **Date** ....

AREA EVALUATION CHECKLIST	✓	COMMENTS
I. COHERENCE OF AREA *What is the area of investigation?*	The researcher can speak and write about the Area of Investigation in a way that makes sense to others and is clearly understood.	✓	The area of investigation is comparing human and animal intelligence.
II. SCOPE OF AREA *What do I need to know to gain an understanding of the area of investigation?*	The questions necessary to investigate for gaining an understanding require more than a quick review of easily accessed sources. The questions are reasonable enough so that the researcher is likely to find credible sources that address the issue in the time allotted for research.	✓	I need to find information about how people have tested animal intelligence. I also need to find out if there have been experiments that have compared humans and animals doing the same task and who is smarter.
III. RELEVANCE OF AREA *How is this Area of Investigation related to a larger topic?*	The Area of Investigation is relevant to the larger topic.	✓	This area of investigation is related to animal intelligence. This larger topic came out of Animals of Translation because Temple Grandin writes about using animal intelligence to benefit animals and humans.
IV. INTEREST IN AREA *Why are you interested in this Area of Investigation?*	The researcher is able to communicate genuine interest in the Area of Investigation. Gaining an understanding of the area would be valuable for the student.	✓	I am interested in this because I think animals are more intelligent than most people think they are. I think there are many ways humans can benefit from knowing more about animal intelligence.

In one or two sentences express the potential area of investigation in the form of a problem or overarching question:

In this area of investigation I need to figure out whether humans or animals are more intelligent. How does animal intelligence compare with human intelligence?

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